CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF CITY PLANNING

DRAFT
ENVIRONMENTAL IMPACT REPORT
85.58E
300 BEALE STREET

Publication Date: June 27, 1986
Public Hearing Date: July 31, 1986
Public Comment Period: June 27, 1986 to August 11, 1986

Written comments should be sent to the Environmental Review Officer,
450 McAllister, 6th Floor, San Francisco, CA 94102

DEPARTMENT OF CITY PLANNING 450 McALLISTER STREET • SAN FRANCISCO, CALIFORNIA 94102

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DEPARTMENT OF CITY PLANNING 450 McALLISTER STREET • SAN FRANCISCO, CALIFORNIA 94102

June 27, 1986

TO: Distribution List for 300 Beale Street EIR

FROM: Barbara W. Sahm, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for 300 Beale Street

This is the draft of the Environmental Impact Report (EIR) for 300 Beale Street. A public hearing will be held on the adequacy and accuracy of this document on July 31, 1986. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses," which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the draft will automatically receive a copy of the Comments and Responses document along with notice of the date reserved for certification (usually about 9 weeks after the hearing on the draft); others may receive such copies and notice on request or by visiting our office. This Draft EIR, together with the Summary of Comments and Responses document, will be considered by the City Planning Commission in an advertised public meeting and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR

has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to individuals only if they request them.

If you want a copy of the Final EIR, please so indicate in the space provided on the next page and mail the request to the Office of Environmental Review within two weeks after certification of the Final EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR. Copies will also be available at the Department of City Planning, 450 McAllister Street, San Francisco, California 94102.

Thank you for your interest in this project.

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

To: Department of City Planning, Office of Environmental Review

Re: 300 Beale Street, Final EIR, 85.58E

(____) Please send me a copy of the 300 Beale Street Final EIR.

Signed: _____

Print Your Name and Address Below:

_____
(Name)

_____
(House Number and Street)

_____
(City, State and Zip Code)

If you are requesting an FEIR, please tear this page out, show your address above, fold the mailer so that your return address and the Department of City Planning's address is exposed, seal, add postage and mail.)

(Fold here)

Return address:

_____

_____

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Place
postage
here

Department of City Planning
450 McAllister Street, 6th Floor
San Francisco, California 94102

ATTN: Paul Maltzer

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

This introduction explains the process of tiering environmental impact reports, and describes tiering in relation to this Draft Environmental Impact Report for the proposed 300 Beale Street project.

TIERED ENVIRONMENTAL IMPACT REPORT

Where a prior environmental impact report (EIR) has been prepared and certified for a program, plan, policy or ordinance, the lead agency for a later project that meets specified requirements must examine significant effects of the later project on the environment, with exceptions, by using a tiered report whenever feasible as determined by the lead agency. (See California Public Resources Code, California Environmental Quality Act (CEQA), Sections 21093 and 21094, including amendments effective January 1, 1986.)

The law states the legislative intent, finding and declaring that:

> tiering of environmental impact reports will promote construction of needed housing and other development projects by 1) streamlining regulatory procedures, 2) avoiding repetitive discussion of the same issues in successive environmental impact reports, and 3) ensuring that environmental impact reports prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate upon environmental effects which may be mitigated or avoided in connection with the decision on each later project; [and] that tiering is appropriate when it helps a public agency to focus upon the issues ripe for decision at each level of environmental review and in order to exclude duplicative analysis of environmental effects examined in previous EIRs.

The law directs that where a prior EIR has been prepared and certified as noted above, the lead agency shall examine significant effects of the later project on the environment by using a tiered EIR, except that the report on the later project need not examine those

effects which were either mitigated or avoided as a result of the prior EIR, or, examined at a sufficient level of detail as a result of the prior EIR to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or other means in connection with the approval of the later project.

300 BEALE STREET

A tiered environmental impact report has been prepared, and is presented herein, for the proposed 300 Beale Street project pursuant to Sections 21093 and 21094 of CEQA. This EIR is tiered from the EIR for the Rincon Hill Plan (82.39E, Final EIR certified July 18, 1985). The cumulative impacts of the development forecast in the Rincon Hill area of San Francisco including this project, are addressed in the Rincon Hill Plan EIR. That cumulative analysis is not repeated in the EIR for this project.

The EIR for 300 Beale Street identifies the project portion of the cumulative impacts forecast in the prior EIR. (The Rincon Hill Plan EIR may be examined at the Department of City Planning, 450 McAllister Street, Sixth Floor, San Francisco; the San Francisco main library; and various branch libraries.)

The 300 Beale Street EIR analyzes project-specific impacts. It discusses potentially significant effects of the project that were not examined in the Rincon Hill Plan EIR and includes applicable mitigation measures for site-specific effects.

I. SUMMARY

A. PROJECT DESCRIPTION (Pages 14-24)

The project sponsor, Lincoln Property Company, proposes to construct a phased mixed-use residential, office, retail and parking project. The project has been designed to be consistent with the policies and objectives of the Rincon Hill Plan.

The 75,669 square-foot site is Lots 1 and 1B of Assessor's Block 3747. The site fronts Beale Street between Folsom and Harrison Streets.

Phase I would involve the renovation and conversion of the vacant Coffin-Reddington building into office space. Phase I would contain 128,536 gross square feet (gsf) of office space, of which 5,948 gsf would be new construction. The existing six-story building would be rehabilitated and a 7,780 square foot public plaza would be added. The building is in a Commercial/Industrial subdistrict of the Rincon Hill Plan, which calls for preservation of the structure. The Phase I office site is zoned M-1, Light Industrial; the basic FAR is 5.0:1 and 200-R height and bulk limits apply.

Phase II, the residential/retail/parking structure, would replace a 121-space surface parking lot. The proposed structure would rise to a total of 22 stories, or 150 feet (measured from Harrison Street). A five-story base, containing parking, retail and residential uses would be a main element of the building. From the base the structure would be stepped up in three stages. The Phase II residential site is in a RC-4 (Residential-Commercial Combined, High Density) District and a 150-R Height and Bulk District.

Phase II would contain 200 dwelling units (178,650 gsf), 2,200 gsf of retail space and 331 parking spaces (110,350 gsf). 29,640 square feet of private, common and public open

space would be included. A prominent feature of the proposed project would be a landscaped plaza, open to the public, located between the Phase I and Phase II structures. There would be public pedestrian access from Harrison Street leading down to the plaza on Beale Street.

The project sponsor anticipates a total construction period of 33 months (Phase I: nine months, Phase II; 24 months) from the date of final approvals. Total construction cost is estimated at $19,350,000. The project architects are Whisler-Patri.

B. ENVIRONMENTAL IMPACTS

1. Land Use and Zoning (Pages 53-59)

The 300 Beale Street project would be developed pursuant to the Rincon Hill Plan which anticipates changes from industrial, commercial and service uses to mixed-use residential/commercial development. The proposed project would increase the density of development on the site, adding new office and residential, and open space uses and introducing new daytime and permanent populations.

The Phase I site is in a M-1 (Light Industrial) District and a 200-R Height and Bulk District. The Phase II site is in a RC-4 (Residential-Commercial, High Density) District and 150-R Height and Bulk District. The project as proposed would require Conditional Use approvals with regard to: (1) a building height in excess of 40 feet in a residential district; (2) site coverage in excess of 80%; and (3) bulk exceptions with regard to the upper tower. The project would include lighting, seating, trees and decorative pavement, as recommended by the Plan for that portion of Beale Street between Harrison and Folsom.

The project would conform to the general objectives of the San Francisco Comprehensive Plan including applicable policies of the Commerce and Industry Element and the Residence Element, except for those policies encouraging the provision of "affordable" housing in new developments.

2. Urban Design and Visual Quality (Pages 60-70)

Phase I would rehabilitate and convert the Coffin-Reddington building into office space and would preserve the building essentially intact. The Phase II tower would be stepped

down in the direction of the existing building, contributing to a more gradual transition between the old and the new buildings. The proposed project would affect views of the City and the 22-story residential tower would become a new element in the skyline. The project would devote over 30,000 square feet of open space for the use of residents and the public and would also provide neighborhood-serving commercial space. In keeping with the policies of the Rincon Hill Plan, a public overlook oriented toward the Bay would be included in the project.

3. Shadow and Wind (Pages 71-80)

a. Shadow

No new shadows would be cast on properties owned by the Department of Recreation and Parks and regulated by Proposition K. The net new shadows created by the project would occur primarily on adjacent streets and sidewalks and on its own public and common open space areas. Existing shadows would also fall on the open space areas at various times throughout the year.

b. Wind

A wind tunnel test of the project area indicates that existing winds do not exceed the 11 mph pedestrian comfort criterion established in Section 249.1 of the Planning Code. At the 10 measurement locations within seating areas created by the project, winds would be below the 7 mph criterion at 4 locations, would equal the criterion at 4 locations, and would exceed it at 2 locations. Landscape features, such as trees, shrubs, fences or screens, would be included in the project to bring the areas into conformance with the 7 mph sitting area criteria. Neither existing winds or winds with the proposed project would exceed the pedestrian hazard criterion.

4. Transportation (Pages 81-98)

The project would generate about 4,155 new person trip-ends per day. About 480 new outbound trips would occur during the p.m. peak period, 295 of these during the p.m. peak hour.

The project would provide 331 parking spaces of which 200 would be assigned to the residential units. Estimated parking demand from the project would be about 197 spaces.

All of the parking would eventually be included in the Phase II structure. During Phase I construction, 119 spaces would be maintained on the Phase II site, however, during the construction of Phase II all on-site parking would be displaced.

The proposed project would generate about 500 new pedestrian trips on sidewalks and crosswalks in the vicinity of the site during the noon peak hour and about 335 new pedestrian trips during the p.m. peak hour. These increases would not change the pedestrian levels of service of the sidewalks and crosswalks which are currently "open".

The project would add about 127 outbound trips to Muni, 70 outbound trips to BART, and about 79 new outbound trips to other transit agencies during the p.m. peak period. In the p.m. peak-hour, the project would generate about 65 new Muni trips and about 40 new BART trips. Addition of the p.m. peak-hour Muni riders would not increase loading ratios in any of the Muni corridors. The project would generate an annual cost deficit to Muni of about $32,005 which would be less than the project's contributions to the General Fund, the Transit Development Impact Fee, and sales tax revenues. The project would result in an annual net operating deficit to BART of about $108,085. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future.

The EIR for the Downtown Plan (EE81.3, Final EIR certified October 18, 1984, available for review at the Department of City Planning, the main San Francisco library and various branch libraries) forecast employment and development in the downtown C-3 Districts to the year 2000, and evaluated the impacts of this forecast employment and development. Project effects fall within this forecast, and within those forecast for the Rincon Hill area, as analyzed in the Rincon Hill Plan Final EIR (82.39E, Final EIR certified July 18, 1985, available as noted above). The summary statements below, and those in the Impacts Chapter regarding cumulative development, are drawn from those EIRs. The lengthy and detailed analysis presented in the prior EIRs will not be repeated in this EIR for the 300 Beale Street project. The relevant material in the Rincon Hill Plan EIR and Downtown Plan EIR is incorporated by reference in the appropriate section of the EIR, by topic.

The transit demand from the project would represent about 0.1% of the total transit demand in the year 2000, with the greatest increases from project riders occurring in the Muni northwest corridor.

The project would represent less than 0.1% of total outbound regional auto demand on major auto corridors (bridges and freeways) in the year 2000.

5. Air Quality (Pages 99-105)

Project-related vehicular traffic would add to cumulative regional pollutant emissions. Project-related traffic would contribute about 1.1% of the total incremental emissions resulting from greater downtown and C-3 development projected in the Downtown Plan EIR. Emissions of total suspended particulates (TSP) generated by the project and cumulative development would increase TSP concentrations, which would increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility.

Project emissions alone would not cause any standards to be violated. At First/Folsom the state and federal eight-hour average CO standards are estimated to have been violated in 1984 but these violations would be eliminated in 1990 as a result of ongoing state and federal emission controls.

6. Energy (Pages 106-112)

Site development, fabrication and transportation of building materials, worker transportation and building construction would require about 39 billion Btu of gasoline, diesel fuel, natural gas and electricity.

Annual energy consumption by the project would be about 50 billion Btu or 8,900 barrels of oil. The project would conform with the requirements of Title 24 of the California Administrative Code.

7. Construction Noise (Pages 113-115)

Construction activities would temporarily increase noise and vibration levels in the area of the site. During excavation and exterior finishing, noise levels 50 feet from the source could reach as high as 89 dBA, and during pile driving, noise levels could reach as high as 105 dBA. Vibrations from the impact during pile driving would be felt at adjacent and nearby buildings.

8. Growth Inducement (Page 118)

The project, along with adoption of the proposed Rincon Hill Plan, would further increase the attractiveness of this portion of the South of Market for office and residential development. The project would help establish Rincon Hill as a major new residential area in the City, which could provide between 3,700 and 6,800 new housing units in the City. As a major development within the Rincon Hill Plan area, the project could stimulate and encourage other development, primarily residential, as called for in the Rincon Hill Plan. The project's introduction of commercial and residential land uses would be expected to contribute to the escalation of land values and rents in the South of Market.

C. MITIGATION MEASURES (Pages 119-124)

Major measures that would mitigate potentially significant environmental effects include the following:

- The project sponsor would contribute funds for maintaining and augmenting transportation services in an amount proportionate to the demand created by the project, as provided by the Board of Supervisors Ordinance Number 224-81. Should said Ordinance be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted by the Planning Commission or the city in-lieu thereof, which would apply to all projects similarly situated.

- On-site transportation brokerage services would be provided for the life of the project to coordinate measures that are a part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information. The transportation management program and the responsibilities of the provider of the transportation

brokerage services would be detailed in a Memorandum of Agreement between the project sponsor and the Department, which would be executed prior to issuance of an occupancy certificate.

- The project sponsor would require the general contractor to sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50%; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soil, sand, or other such material; and sweep streets surrounding construction sites at least once a day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of a construction period.

- The project sponsor would require that the construction contractor predrill holes for piles, in order to minimize noise and vibration from pile driving. The actual pounding from pile driving would occur during a five- to eight-minute span per pile. The project sponsor has agreed to limit pile driving to the hours resulting in the least disturbance to the greatest number of neighboring uses. For nighttime pile driving, this would require a work permit from the Director of Public Works, pursuant to San Francisco Noise Ordinance Section 2970(c). The project sponsor would schedule pile driving so as to disturb the fewest people.

- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise measurements would be prepared by the project sponsor and recommended noise insulation features would be included as part of the proposed building. For example, such design features could include fixed windows and climate control.

D. ALTERNATIVES TO THE PROPOSED PROJECT (Pages 126-132)

The following alternatives to the proposed project are discussed in Chapter VII, page 126.

1. Alternative A: No-Project

This alternative would entail no change to the site. The existing building on the site would remain vacant. Cars would continue to park on the surface lot.

This alternative was rejected by the project sponsor because it would not use the development potential of the site. The sponsor would like to renovate the existing building and create a development that is the highest and best use of the property, consistent with current zoning.

2. Alternative B: Phase I with Parking On-Site/Phase II with Parking On-Site

This alternative would convert the existing building to office space, as described in the proposed project, and add a basement garage to the existing building to accommodate its own parking requirement on-site. The garage would have three subgrade levels containing 119 spaces and would be accessed from Beale Street. The Phase II residential structure would remain the same as the proposed project except that 119 parking spaces would be eliminated. The spaces for residential and commercial parking would remain the same.

All impacts of this alternative would be the same as for the project, except for construction noise, construction traffic and air quality. Excavation of the garage levels would extend construction approximately three to four months beyond the nine months envisioned for the Phase I rehabilitation. Increased construction activity would result in higher levels of exhaust, dust and particulates and could also interfere with the transportation network due to increased construction vehicle activity.

The project sponsor has rejected this alternative because, in the project sponsor's opinion, the close column spacing creates an inefficient parking layout which requires three floors of parking and it is infeasible from both an engineering and cost standpoint to excavate the construct three subgrade levels beneath the existing building.

3. Alternative C: Phase I, All Office/No Housing

Alternative C would consist of Phase I buildout only. No housing would be constructed on-site. The existing Coffin-Reddington building would be rehabilitated as proposed. 2,571 square feet of open space would be provided in a plaza on the south side of the building.

Required parking, 119 spaces, could be accommodated on the lot where Phase II would have been located. Section 159(c) of the Planning Code permits required off-street parking to be located within 800 feet of the use being served.

Construction of this alternative would last about nine months. The construction impacts that would result from the 24-month schedule anticipated by Phase II would not occur. The pedestrian plaza would have a positive visual impact. Views of the site and from the site would remain unchanged. Shadows and wind effects would remain at current levels. The office project would have a housing requirement of 50 units (with 62% reserved for low- and moderate-income households) under City Planning Code Section 313, the Office Affordable Housing Production Program (OAHPP).

This alternative would generate about 56% of the person-trip-ends generated by the project. Consequently, levels of transportation, air quality and energy would be less than the proposed project. Vehicle trips and trips on transit from Alternative C would be about 90% of those generated by the project. The office portion of the proposed project accounts for a larger portion transportation impacts than the housing would.

The sponsor has rejected this alternative because the sponsor thinks that the project as proposed represents the highest and best use of the existing property, consistent with current zoning and objectives of the Rincon Hill Plan.

4. Alternative D: All Housing, With Tower

This alternative would involve converting the existing building to housing in Phase I, and constructing Phase II as proposed. A maximum of 171 units would be allowed under current density restrictions set by Section 249.1(d)(3) of the Code. The converted building would contain 107 units, or 116,500 gsf. Conditional Use authorization would be required to allow residential uses in an M-1 District.

Conversion of the existing building to residential uses would involve considerable modification. The large floorplate of the existing building, originally designed for warehousing, would necessitate the construction of an interior lightwell. Units would be arranged around the lightwell and along the perimeter of the existing walls.

Compared to the project, transportation, air quality and other impacts would be reduced by about 60%. Alternative D would generate 1,522 less person-trip-ends than the proposed project. About 39 new Muni trips would be generated during the p.m. peak-period, about 90 less than the proposed project. Wind and shadow effects would be the same as for the project.

The project sponsor has rejected this alternative because it considers the existing building to be less suited for residential uses than office uses due to the difficulty of converting a warehouse floorplate to habitable residential space. In particular, the units on the west side of the building would be, in the sponsor's opinion, difficult to market because of the lack of light, air and views.

5. Alternative E: All Housing, Without Tower

Alternative E would be limited to the conversion of the Coffin-Reddington building to housing. As with Alternative D, 107 units would be created. 8,962 square feet of open space would be required and would be provided in the form of a public plaza and a courtyard common to the residents of the project. The remainder of the site would be used for residents' parking. Conversion of the existing building to residential uses would follow the procedure described above in Alternative D.

All of the impacts associated with the buildout of the Phase II structure would be avoided. Wind and shadow effects would not change from the current setting and the site would visually appear much the same as it does now.

In terms of transportation and air quality impacts, Alternative E would have the least impacts compared to the proposed project and the other alternatives. Alternative E would generate about 803 person-trip-ends; less than 10 vehicle trips in the peak-period; and about 12 transit trips during the peak-period. This would be about 80% less than the proposed project.

The project sponsor has rejected this alternative because it considers the existing building to be less suited for residential uses than office uses due to the difficulty of converting a warehouse floorplate to habitable residential space. In particular, the units on the west side of the building would be, in the sponsor's opinion, difficult to market because of the lack of light, air and views.

II. PROJECT DESCRIPTION

A. PROJECT SPONSOR'S OBJECTIVES

Lincoln Property Company proposes to convert a vacant 6-story warehouse to office uses and construct a 22-story residential structure containing 17 stories of residential units above a 5-story parking/residential/retail base. The project sponsor's objectives are to develop a high-quality mixed-use project containing office, residential, retail, parking and open space uses.

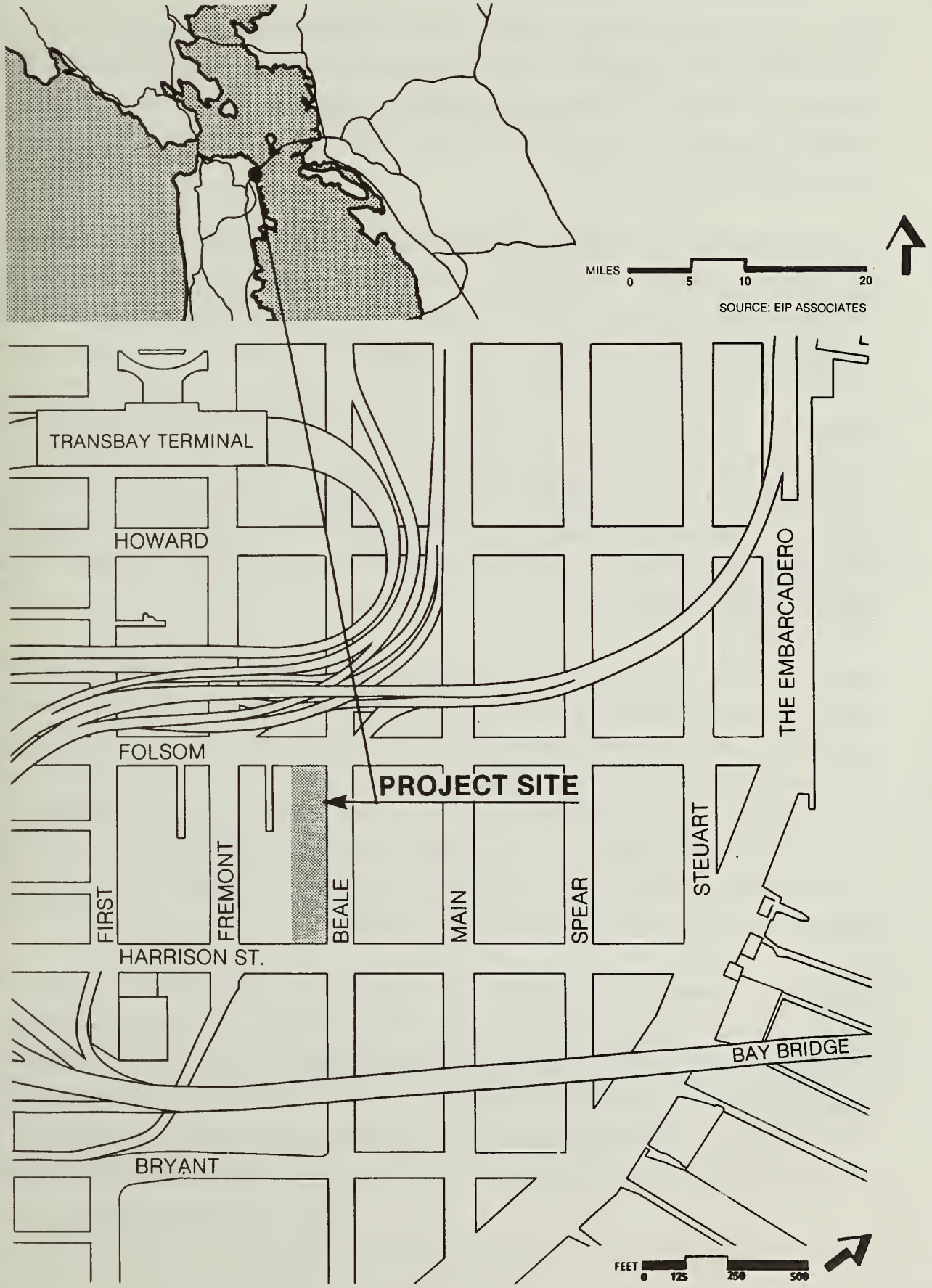
B. PROJECT LOCATION

The project site is located in the Rincon Hill area of San Francisco. The proposed project would occupy Lots 1 and 1B of Assessor's Block 3747. Assessor's Block 3747 is bounded by Beale Street on the east, Harrison Street on the south, Fremont Street on the west and Folsom Street on the north (Figure 1, page 15). The project lots combined occupy 75,669 square feet. The proposed mixed-use project would be developed in two phases. Phase I would involve the renovation and conversion of the vacant Coffin-Reddington building on the north end of the site into office space. Phase II, the residential/parking structure, would replace a 121-space surface parking lot located on the south end of the site.

The project site is within the Rincon Hill Special Use District and is subject to controls specific to that district. The Phase I office site is zoned M-1, Light Industrial. The basic Floor Area Ratio (FAR) is 5.0:1 and 200-R height and bulk limits apply. The Phase II residential site is in a RC-4 (Residential-Commercial Combined, High Density) District and a 150-R Height and Bulk District. Floor area ratios and density limitations do not apply. For Phase II a maximum building height of 150 feet is allowed. Between 51 and 105 feet the maximum allowable building length and diagonal dimension is 200 feet. Above 105 feet the maximum length allowed is 110 feet and the maximum diagonal dimension is 125 feet.

PROJECT LOCATION MAP

FIGURE 1



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C. PROJECT CHARACTERISTICS

The proposed project would consist of the renovation and conversion of the vacant Coffin-Reddington building into office space (Phase I) and the construction of a 22-story structure containing 17 stories of residential units above a 5-story base containing parking, residential and ground-level commercial uses. Project characteristics are summarized in Table 1, page 17.

The existing Coffin-Reddington building (built in 1937) contains about 122,588 gross square feet of office/warehouse space and has been vacant since 1981.[1] This space would be rehabilitated and 5,948 gsf of new construction would be added to the ground, second and sixth floor, bringing the total office space to 128,536 gsf. The additions would be limited to internal construction and would therefore not increase any existing discrepancies between the existing structure and the height and bulk requirements of the Planning Code. The FAR for Phase I would be 3.7:1.[2] The building would be 66 feet high (see Figures 2, 3 and 5, pages 18, 19 and 21). Pedestrian entrances would be from Beale Street. A pedestrian plaza containing 7,780 square feet would separate the Phase II tower from the office building. An off-street loading area serving Phase I would be located adjacent to the pedestrian plaza.

Phase II of the proposed project would consist of residential, commercial, parking and open space uses. An existing surface parking lot with 121 spaces would be removed. The proposed structure would be stepped up in three stages from six stories above the base to 17 stories above the base (see Figure 2, page 18). Phase II would contain 200 dwelling units, ranging in size from 525 square feet to 1,288 square feet, and 331 parking spaces. There would be about 320,840 gsf of developed space. Of this area 178,650 sq. ft. would be residential; 110,350 sq. ft. would be for parking; 29,640 square feet would be open space; and 2,200 sq. ft. would be for commercial use.

A five-story base would be a main element of Phase II. The ground floor would contain parking, loading and commercial uses, and the building lobby. Two off-street loading bays would be located in the building, accessible from Beale Street. Vehicles would enter the garage through an entrance on Beale Street. Some street level garages belonging to the townhouses and stairways leading to the townhouses would also be located on Beale Street. Commercial uses would occupy the remainder of the Beale Street ground floor

TABLE 1

PROJECT CHARACTERISTICS

Phase I Office

Use	Gross Area (Sq. Ft.)	Height - Bulk	Existing[1]	Permitted
Office	128,536	Height	66	200
Open Space[1]	7,780	Length	238	200 (betw. 51-105 ft.)
			N/A	110 (above 105 ft.)
Total	136,316	Diagonal	267	200 (betw. 51-105 ft.)
			N/A	125 (above 105 ft.)

Phase II Residential/Retail/Parking

Use	Gross Area (Sq. Ft.)	Height - Bulk	Proposed	Permitted
Residential	178,650	Height	150[3]	150
Retail	2,200	Length	147	200 (betw. 51-105 ft.)
Parking[2]	110,350		94	110 (above 105 ft.)
Open Space[2]	29,640	Diagonal	158	200 (betw. 51-105 ft.)
			107	125 (above 105 ft.)
Total	320,840			
Residential Units	200			
Parking Spaces	331			

Total For Project

Residential	178,650
Office	128,536
Parking	110,350
Open Space	37,420
Retail	2,200
Total	457,156

[1] Existing building conforms to 1979 Planning Code but exceeds allowable length and diagonal dimensions under current code. No change from existing dimensions is proposed.

[2] Not included in gross floor area as defined by the City Planning Code.

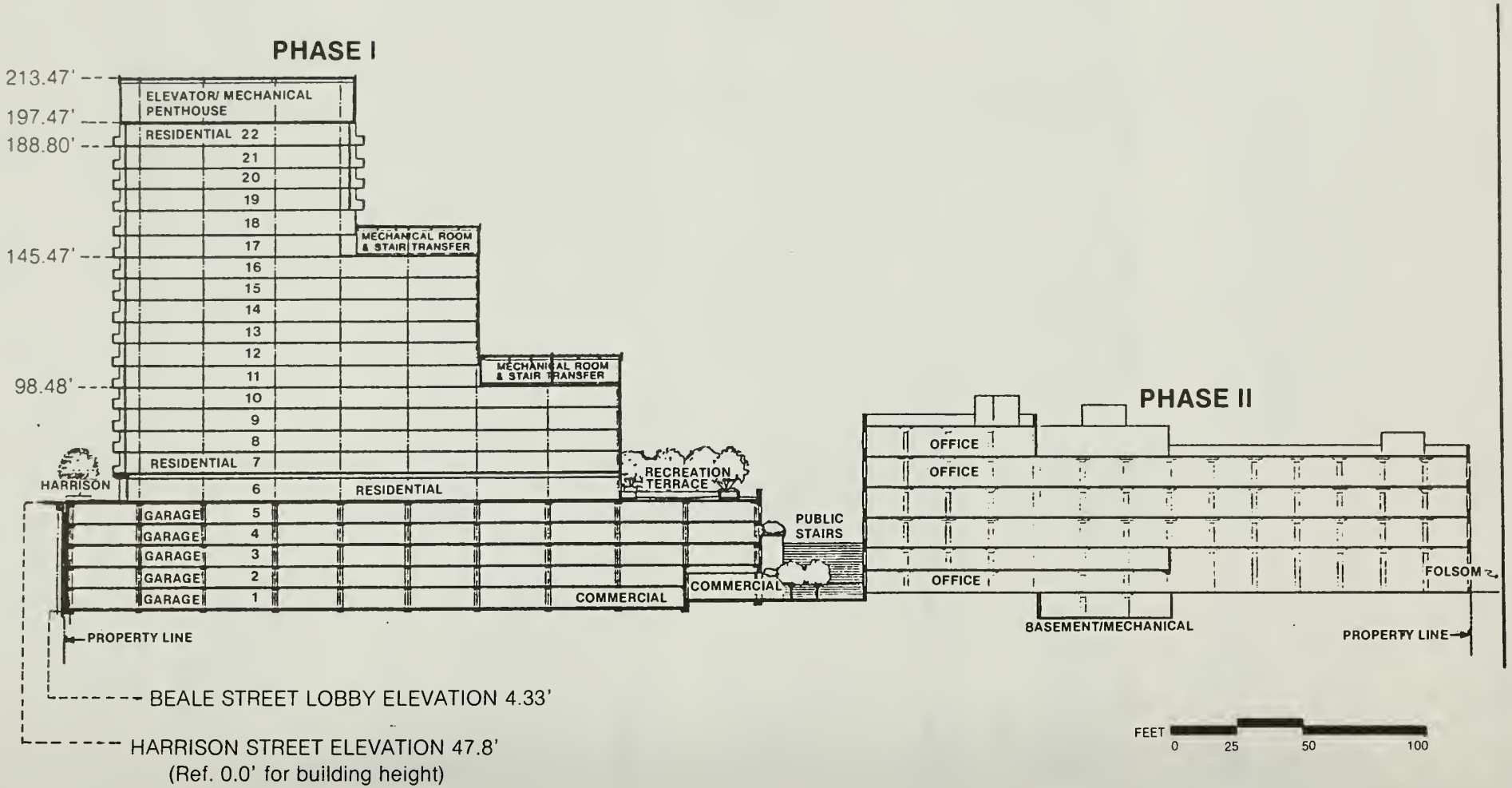
[3] Measured from Harrison Street.

Source: EIP Associates/Whisler-Patri.

PHASE I/PHASE II: SECTION

FIGURE 2

SOURCE WHISLER-PATRI



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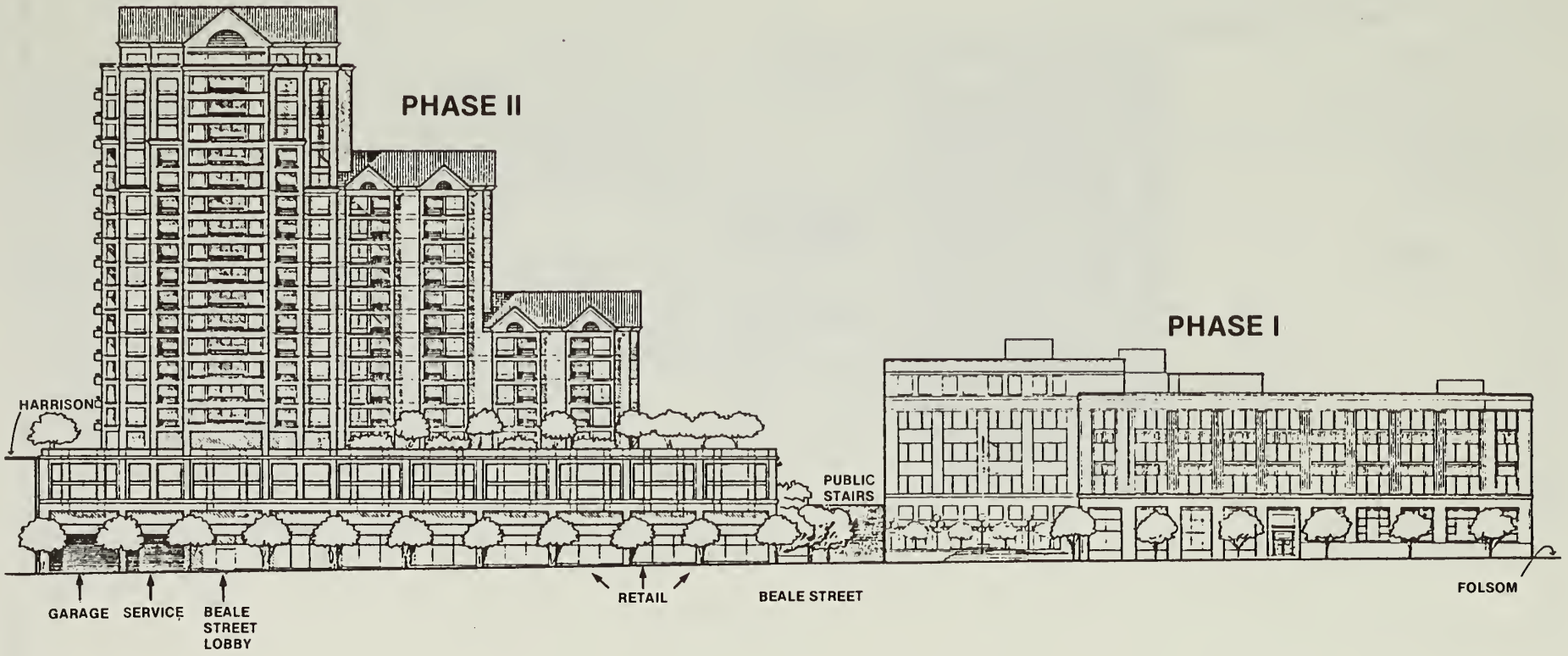
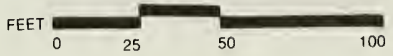
PHASE I/PHASE II: EAST ELEVATION

FIGURE 3

SOURCE WHISLER-PATRI





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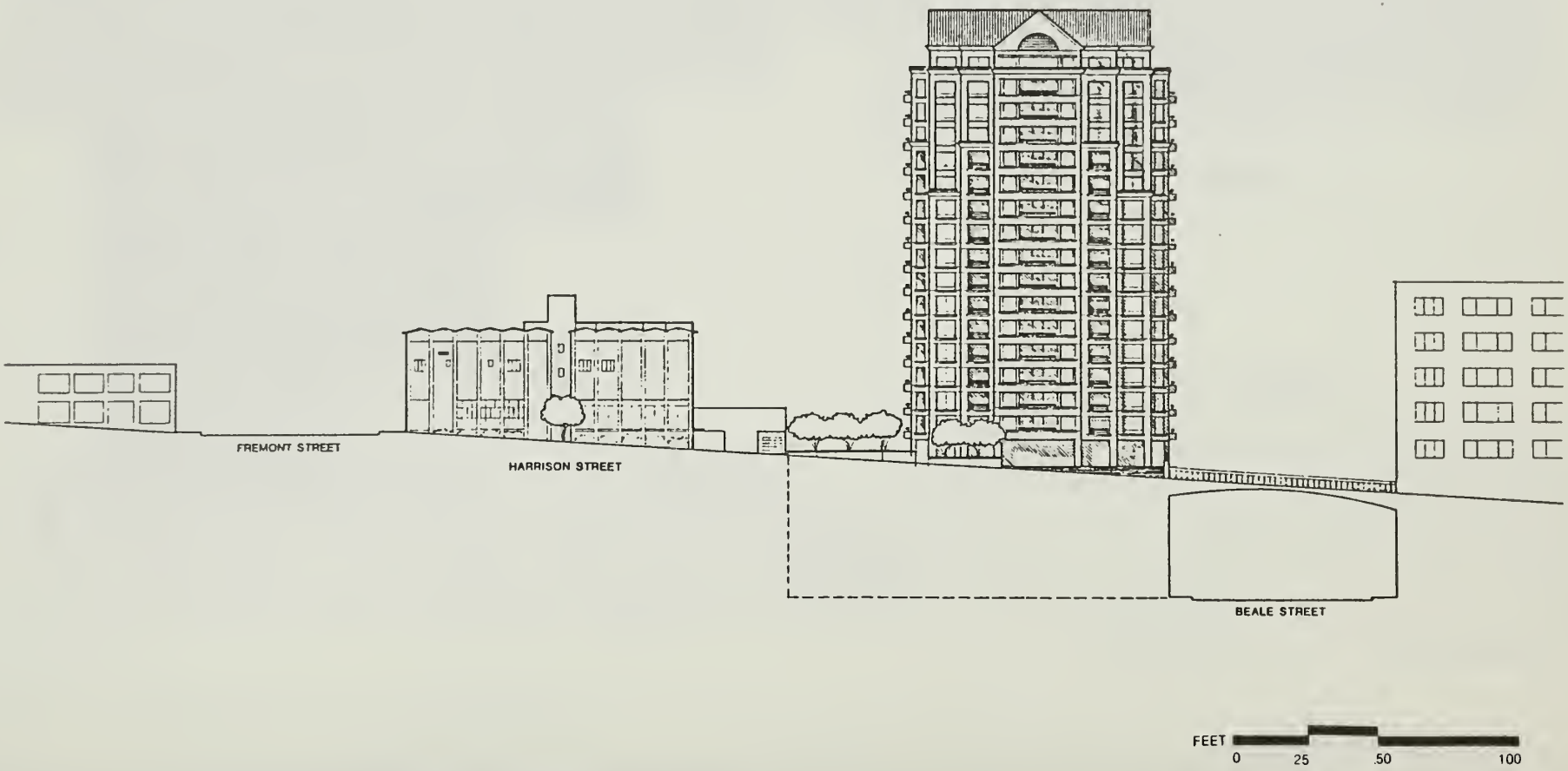
PHASE II: SOUTH ELEVATION

FIGURE 4

SOURCE WHISLER-PATRI

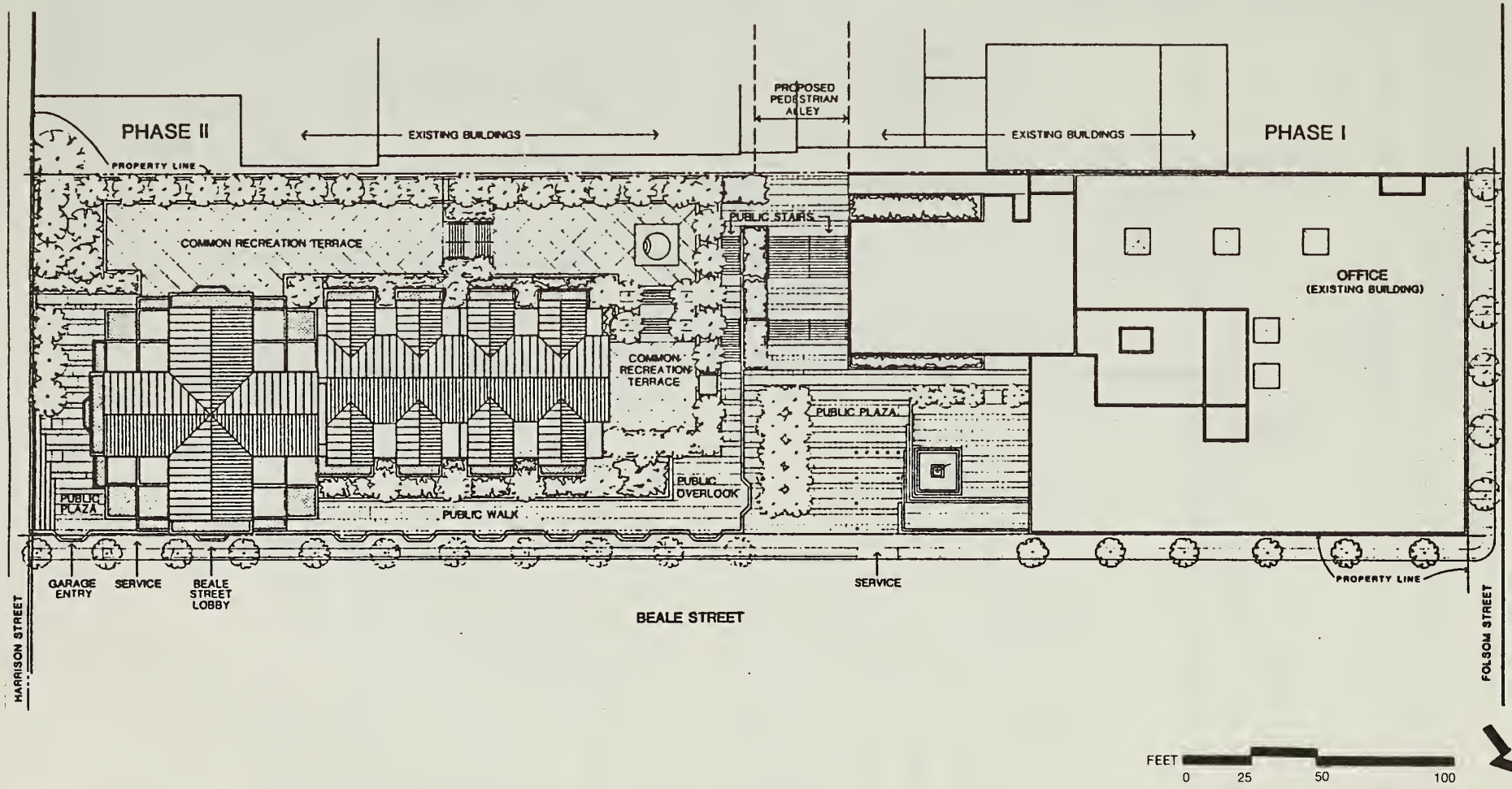


85003

SITE/ROOF PLAN

FIGURE 5

SOURCE: WHISLER-PATRI

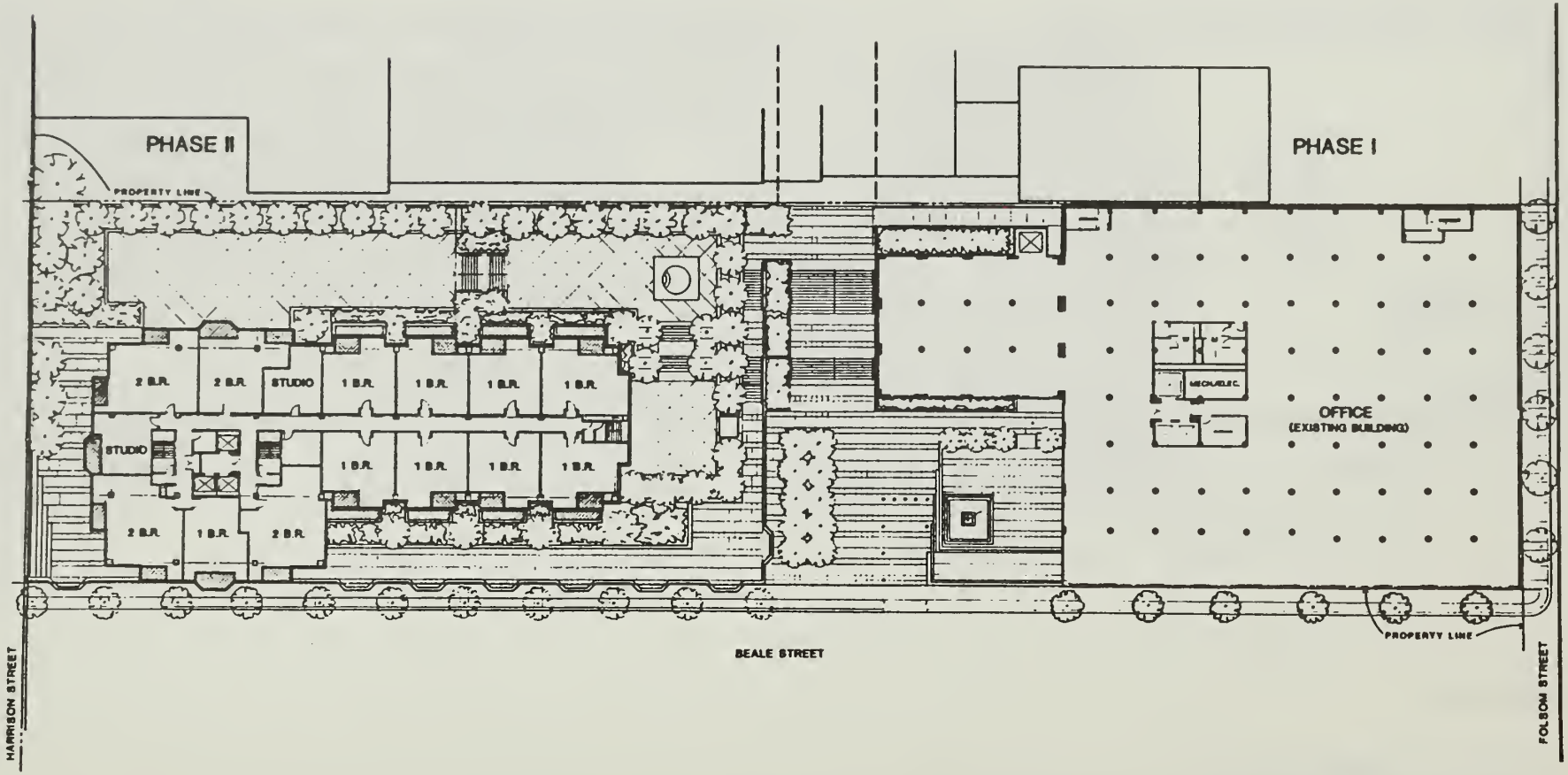


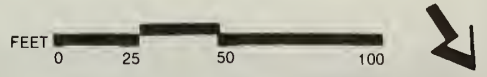
85003

PHASE I/PHASE II: TYPICAL FLOOR PLAN

FIGURE 6

SOURCE WHISLER-PATRI





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level. The second, third, fourth and fifth floors would contain parking and residential units. The residences would face Beale Street and separate the parking from Beale Street on all levels, except the ground level.

Above the fifth level a tower would rise to the 22nd floor. It would be stepped back at the 11th and 17th floors. The tower would be primarily residential, with common areas and private open space. There would be public pedestrian access from Harrison Street leading to the plaza on Beale Street.

Measured from Harrison Street, the Phase II structure would rise to a height of 150 feet. A mechanical penthouse would extend about 16 feet beyond this height. Harrison Street is about 50 feet higher than Beale Street, as can be seen in Figures 2 and 4, pages 18 and 20. The Phase II base would be built to the property line along Beale Street. The tower would be set back about 25 feet from Harrison Street starting at the sixth floor (from Beale Street) which would be street level at Harrison Street. Part of the building would be set back from Beale Street, above the fifth floor. Above 51 feet the building length would be 147 feet and the diagonal dimension would be 158 feet. Above 105 feet these measurements would be 94 feet and 107 feet, respectively. Elevations and floorplans for the proposed project are shown in Figures 2-6, pages 18-22.

The proposed project would provide a total of 37,420 gsf of open space. There would be 1,860 gsf of private open space, 17,460 gsf of common open space and 18,100 gsf of public open space. Private open space would be included in some of the residential units and there would be common areas as well, such as the podium terraces. A prominent feature of the proposed project would be a landscaped plaza, open to the public, which would lead to the main entry to the office building and abut the pedestrian alley, called for by the Rincon Hill Plan. The pedestrian alley, part of an eventual east-west alley system designed to divide the large South of Market blocks and promote pedestrian and vehicular access, would function as a plaza, landscaped and publicly-accessible, until the development of properties on Fremont Street could link it with Beale Street (see Figure 5, page 21).

The project architects are Whisler-Patri.

D. PROJECT SCHEDULE, COST AND APPROVAL REQUIREMENTS

If the project is approved, the project sponsor anticipates that Phase I renovation and conversion would take about nine months and construction of Phase II would last about 24 months.

Estimated cost of construction for both phases is $19,350,000 (Phase I: $4,350,000; Phase II: $15,000,000).

Following a public hearing before the City Planning Commission on the Draft EIR, responses to written and oral comments will be prepared. The EIR will be revised as appropriate and presented to the City Planning Commission for certification. No permits may be issued before the Final EIR is certified.

After certification of the EIR the City Planning Commission would hear the application for Conditional Use (CU) authorization. Because Phase II of the proposed project would be over 40 feet high in a residential district, it would require Conditional Use authorization (Section 253(a) and (b) of the Planning Code). Phase II of the project also requires Conditional Use authorization because it exceeds site coverage limits as set forth in Section 249.1(b)(1)(A). However, exceptions are allowed by Conditional Use if the site slopes and if site coverage above 50 feet does not exceed 80%. Conditional Use authorization is also required for exception to the volume requirement as applied to the upper one-third of the Phase II tower, pursuant to Section 270(c)(3). Criteria for deciding whether a CU would be granted include compatibility of the proposed project with the neighborhood, the proposed size, shape and arrangement of structures, adequacy of parking and loading, and determination of compliance with the Master Plan (Section 303). Based upon findings in the Final EIR and testimony at the public hearing on the CU application, the City Planning Commission would approve or deny the request for CU authorization.

The Rincon Hill Plan was adopted and proposed amendments to the City Planning Code to implement it (Permanent Controls) were approved by the City Planning Commission on October 31, 1985 (Resolution No. 10468). The proposed amendments were acted on by the Board of Supervisors and signed by the Mayor, on December 4, 1985, and became effective January 6, 1986.

The Office Growth Limitation Ordinance (Ordinance No. 414-85 approved September 10, 1985 by the Board of Supervisors, signed by the Mayor September 17, 1985, and effective October 17, 1985) limits growth in the form of major office developments (over 50,000 sq. ft.) in San Francisco to a total of 2.85 million sq. ft. over a period of three years (an average of 950,000 sq. ft. per year). A portion of this (1,067,913 sq. ft.) has been used by approved developments.

In accord with the ordinance, the project would be subject to review and approval under Planning Code Section 321, Office Approval and Limits. The City Planning Commission would hold a public hearing to consider the project application under Section 321 and would adopt a motion approving, approving with conditions, or disapproving the project. If the project is approved by the City Planning Commission, the project sponsor must obtain building and related permits from the Central Permit Bureau of the Department of Public Works.

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[1]Bernard Yosten, Project Manager, Lincoln Property Co., telephone conversation, March 14, 1985.

[2]FAR based on a lot size of 34,375 (AB 3747/Lot 1B). (128,536/34,375 gsf = 3.7) The Department is currently considering increasing the size of Lot 1B to 35,475 square feet which would result in an FAR of 3.6:1. This would also result in a transfer of publicly-accessible open space from Phase II to Phase I.

III. ENVIRONMENTAL SETTING

A. LAND USE AND ZONING

1. Land Use

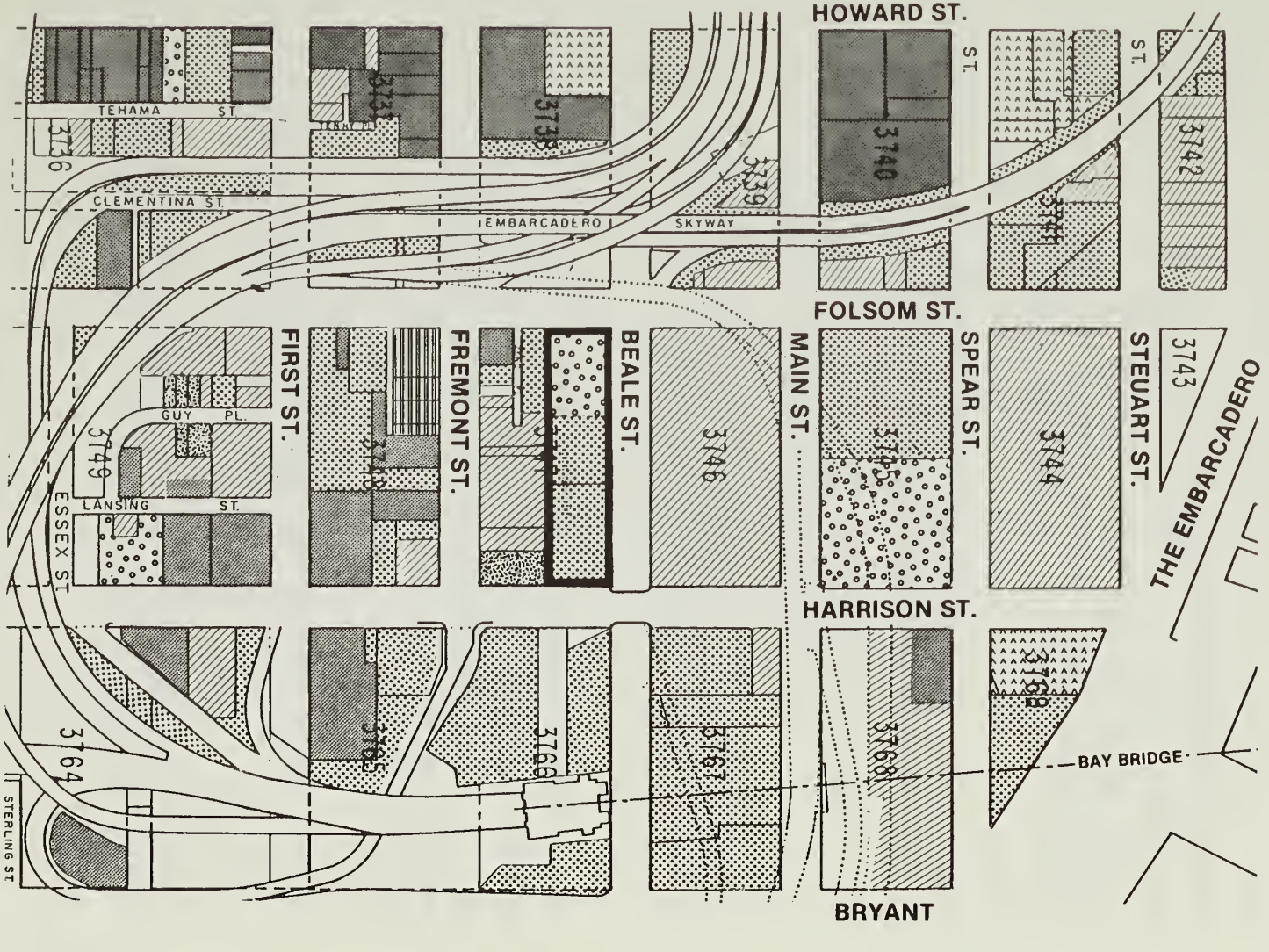
Existing land uses in the project vicinity (within 1-3 blocks) are primarily light industrial, office/commercial and surface parking lots (Figure 7, page 27). Land uses on the project block include parking, manufacturing, commercial/office uses and the Apostleship of the Sea, a temporary room and board facility for sailors. Assessor's Block 3746, directly to the east of the project site, is owned by the Federal Government and is used by the Post Office, General Services Administration and the U.S. Treasury. Further east, toward the Embarcadero, is Hills Bros. Coffee, Inc., the coffee processing and packaging plant that has been in the city since 1887. It is presently moving its operations to another site in the City. Hills Bros. Coffee, Inc. plans to convert the landmark building into office use and construct a mixed-use (office, residential, retail, open space, parking) project on the remainder of the site. To the southwest of the site, bounded by the Bay Bridge, First, Harrison and Fremont Streets, are the Union Oil credit offices and clocktower. The clocktower, a distinctive landmark for motorists coming into the City from the East Bay, rises the equivalent of 14 stories. The nearest permanent residential uses are two blocks to the west of the project site on Guy Place. Rincon Hill is encircled by the Bay Bridge and the Embarcadero Freeway. There is an on-ramp to the Embarcadero Freeway at Folsom and Beale and elevated portions of the freeway run parallel to Folsom Street across the street from the project site. Parking lots are located under many of the freeway elevations; parking is a major land use in this area.

2. Zoning

The project site is in the area covered by the Rincon Hill Plan. The EIR prepared for the Rincon Hill Plan was certified on July 18, 1985. Amendments to the San Francisco

EXISTING LAND USE

FIGURE 7



VACANT BUILDING

INDUSTRIAL

COMMERCIAL OFFICE

RESIDENTIAL

PARKING

VACANT LOT

UTILITIES

UNDER CONSTRUCTION

SOURCE EIP ASSOCIATES. DEC. 1985

FEET 0 100 200 400

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Planning Code to implement the Rincon Hill Plan were approved and adopted by the City Planning Commission on October 31, 1985 (Resolution No. 10468). The proposed amendments were acted on by the Board of Supervisors and signed by the Mayor on December 4, 1985 and became effective January 6, 1986.

The Phase I office site is within an M-1 (Light Industrial) District, subject to Rincon Hill Special Use District controls for Commercial/Industrial subdistricts (see Subsection 3, below). Professional and business offices are permitted as principal uses. The basic Floor Area Ratio (FAR) in an M-1 District is 5.0:1, meaning that the total gross floor area may be five times the area of the site. The Phase I site is in a 200-R Height and Bulk District which allows a maximum building height of 200 feet. Bulk requirements in an "R" bulk district are described below. Section 172(b) of the Code states that no existing structure, which fails to meet the requirements of the Code in any manner, shall be reconstructed or altered so as to increase the discrepancy or create a new discrepancy between existing conditions on the lot and the required standards for new construction.

The Phase II residential site is within an RC-4 (Residential/Commercial, High Density) district, subject to Rincon Hill Special Use District controls for Residential subdistricts (see Subsection 3, below). The site is also within a 150-R Height and Bulk District. Floor area ratios and density limitations do not apply. Section 249.1(c)(1)(A) of the Planning Code states that for an RC-4 District there must be at least six square feet of uses permitted by Section 209.1 of the Code (i.e., residential) provided for each one net square foot of other uses. A maximum building height of 150 feet is allowed, however, Conditional Use authorization is required for projects over 40 feet in all residential districts (Section 253(a)). Section 260(b)(1)(A) allows mechanical equipment and penthouses to extend 16 feet beyond the maximum height limit where the height limit is more than 65 feet.

Section 270(c) of the Code sets forth bulk limitations that are applicable to the proposed project. Phase I and Phase II are in bulk district "R". Section 270(c)(1) limits plans dimensions measured longitudinally and diagonally to 200 feet and limits the average individual floor area to 20,000 gross square feet between 51-105 feet of height. Section 270(c)(2) states that the maximum allowable building length is limited to 110 feet and the

maximum diagonal dimension may not exceed 125 feet except for the lower one-third of the structure above 105 feet. The average floor area of all floors above 105 feet is limited to 7,500 gross square feet. Section 270(c)(3) limits the volume of the upper one-third of the structure above 105 feet so that buildings achieve a tapered form. (See Figures 8 and 9, pages 30-31 for Use and Height and Bulk Districts.)

3. Rincon Hill Plan

Section 249.1 of the Planning Code was added to establish the Rincon Hill Special Use District and provide regulation of features such as uses, height, bulk, setbacks, site coverage, open space, parking, density, building design, sidewalk improvements and reduction of ground level wind currents. Height, bulk, density and building design are discussed above. Wind is discussed in Section III.C.2., page 39.

a. Uses (Section 249.1(c)(1)(C)). In residential subdistricts, uses along a street frontage at grade level are confined to residential lobbies, parking entrances and exits and office and retail uses. Building entrances or display windows must occupy at least half of the total width of any new building facing the street.

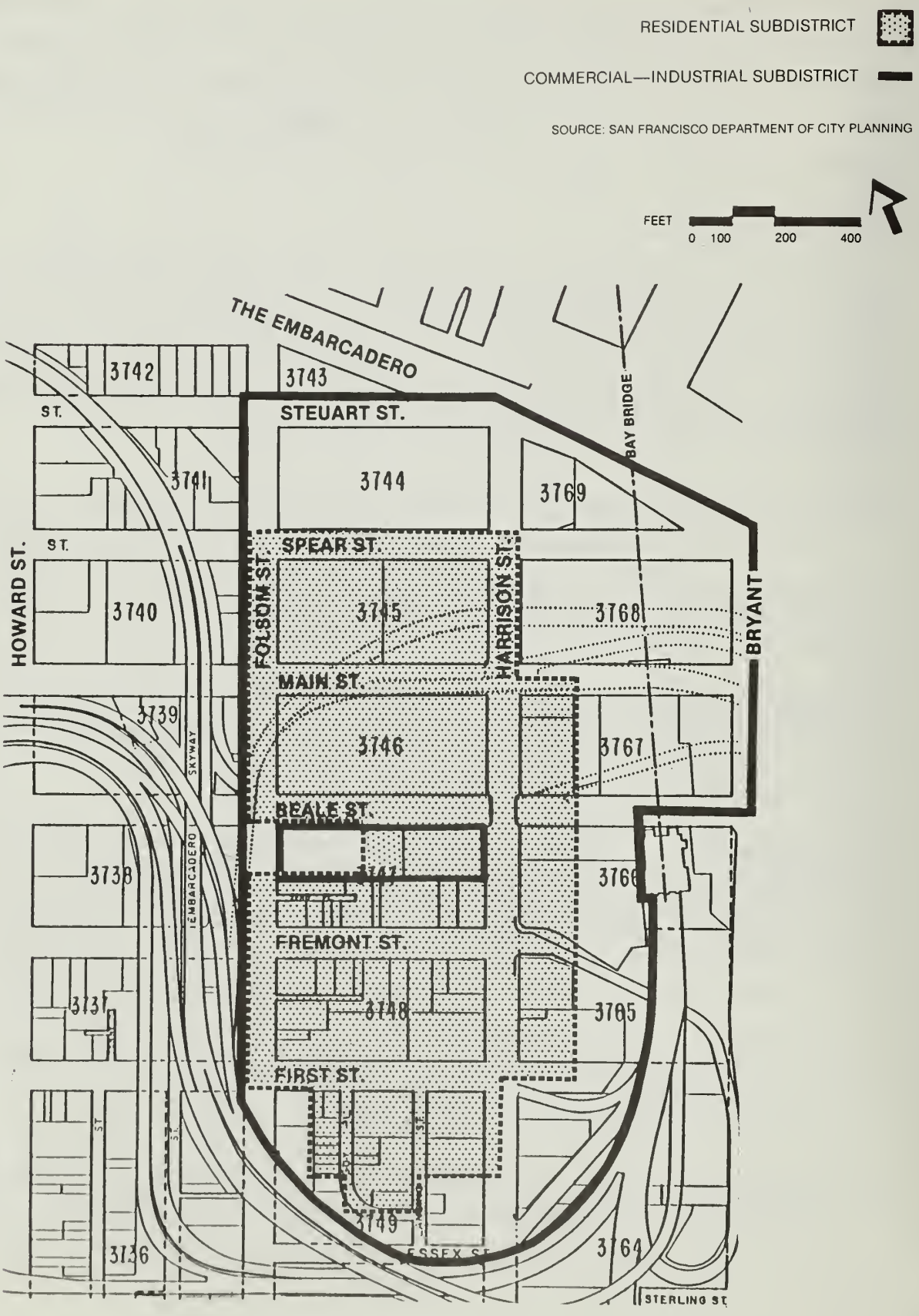
b. Setbacks (Section 249.1(c)(3). In residential subdistricts, above 50 feet in height, a minimum of 50% of the building frontage must be set back a minimum of 25 feet from the front property line.

c. Site Coverage. In both residential and commercial/industrial subdistricts, site coverage for new buildings must not exceed 80% (Section 249.1(b)(1)(A)). Exceptions to this regulation may be allowed by Conditional Use authorization if the site slopes, and if site coverage above 50 feet does not exceed 80% (Section 249.1(b)(1)(B)). The provisions of Section 134 governing rear yard requirements do not apply (Section 249.1(b)(1)(C)). Section 249.1(b)(1)(D) states that the portion of the site not covered by a building pursuant to Section 249.1(b)(1)(A) cannot be used for parking, open storage, or service activities such as freight loading.

d. Open Space. Open space is required in both residential and commercial/industrial subdistricts. For residential subdistricts one square foot of open space per 13 square feet of gross floor area of dwelling units must be provided (Section 249.1(c)(4)(A)).

RINCON HILL PLAN USE DISTRICTS

FIGURE 8



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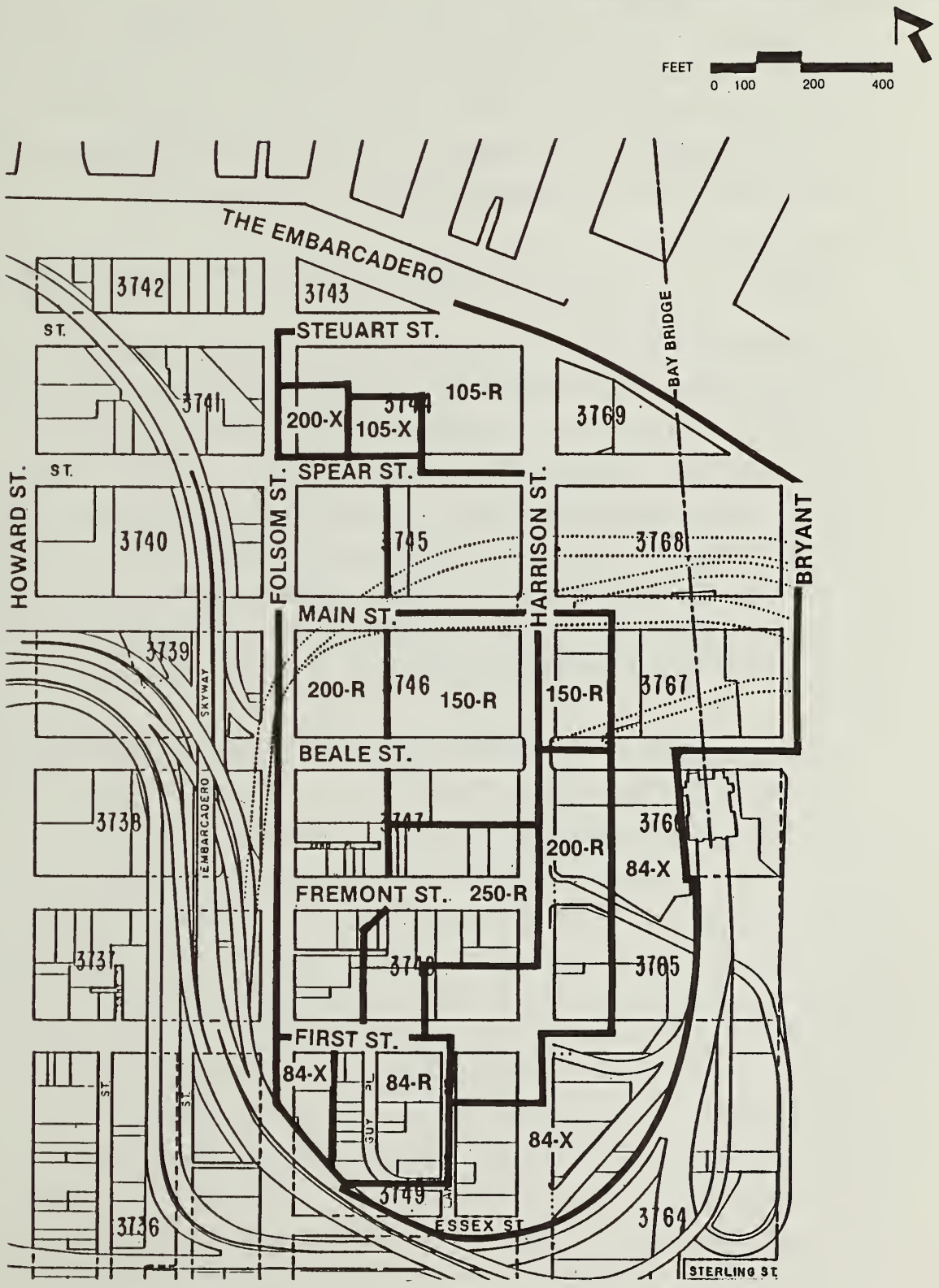
RINCON HILL PLAN HEIGHT AND BULK DISTRICTS

FIGURE 9

SOURCE: SAN FRANCISCO DEPARTMENT OF CITY PLANNING



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The open space can be "private usable open space," "common usable open space" or "publicly accessible open space"; however, no more than 40% of the open space requirement may be private usable open space (Section 249.1(c)(4)(B)). For commercial/industrial subdistricts the requirement is one square foot of publicly accessible open space per 50 square feet of gross floor area (Section 249.1(d)(1)(A)). Publicly accessible open space for both subdistricts may include sidewalk widening and a pedestrian street, among others (Section 249.1(c)(4)(C)).

e. Parking. For residential subdistricts one parking space for each dwelling is required (Section 249.1(c)(5)(A)). The residential portion of Phase II would require 200 spaces. Parking for office or retail space in residential areas is calculated at a rate of one space for each 1,500 occupied square feet (Section 249.1(c)(5)(B). The retail portion of Phase II would require two spaces. Section 249.1(c)(5)(C) states that within 25 feet, parking cannot occupy the first two stories above grade. In commercial/industrial subdistricts the parking requirement is one space for each 1,000 square feet of occupied floor area unless Section 151 of the Code imposes a lesser requirement (Section 249.1(d)(2). Phase I of the project would require 119 spaces. Section 152 of the Code would require two freight loading spaces for the combined office, residential and retail uses in Phases I and II.

f. Sidewalk Treatment. Section 249.1(b)(2)(A) requires that developers provide lighting, decorative paving, seating, landscaping and street trees in accordance with guidelines developed by the Department of City Planning.

B. URBAN DESIGN AND VISUAL QUALITY

The northern third (approximately) of the project site is occupied by the Coffin-Reddington building (see Figure 10, page 34). The Coffin-Reddington Company was a wholesale drug and chemical company. The building was constructed in 1937 by the architect F.H. Meyer. Photographs and drawings contained in the F.H. Meyer collection at the Environmental Design Library at U.C. Berkeley show the mushroom column drop panel construction used in the building.[1] Notable ornamental details include fluting on the piers and chevron/half circle friezes at the cornice. The remainder of the project site is currently used as a parking lot (see Figure 11, page 35).

The project site and surrounding area are not included in the 1979 Foundation for San Francisco's Architectural Heritage (Heritage) survey of buildings of architectural and historic merit, as that survey encompassed only the Downtown C-3 zoning districts, which currently ends at Folsom Street. Under contract with the Department of City Planning, Heritage has since expanded its survey boundaries and has conducted preliminary ratings of buildings in the South of Market area, south of Folsom Street. These ratings are not officially adopted yet, and are currently under review and subject to approval by the Department of City Planning. The Coffin-Reddington building received a preliminary "B" rating. Heritage defines "B" as having "major importance."[2] This preliminary survey rating, as with the original 1979 survey, rated historically or culturally significant buildings built after 1945 from a high of "A" to a low of "D".

In the Department of City Planning City-wide 1976 Architectural Survey, approximately 10% of the City's entire stock of buildings were awarded a rating for architectural merit in one of six categories ranging from "0" to a high of "5". The total number of buildings were awarded ratings of "3", "4" or "5" represents less than 2% of the City's entire building stock. The higher-rated buildings in the Rincon Hill area include Hills Brothers Building (2 Harrison) rated "3"; Union Oil Company (425 First) and Sailor's Union of the Pacific (450 Harrison) both rated "4". Buildings in the Rincon Hill area which received a rating of "2" in the 1976 survey include 66-68 and 70-76 Lansing; 33 Second; 501 Folsom, and the former Joseph Magnin Warehouse at 59 Harrison. Other notable structures include Klockars Blacksmith and Metal Works, built in 1912 at 443 Folsom which received a rating of "1" in the 1976 survey and subsequently local landmark designation. Other buildings with a rating of "1" include those at 75 Lansing, 347 Fremont and 355 Fremont.

PROJECT SITE PHOTO

FIGURE 10

PHOTO SOURCE SQUARE ONE FILM & VIDEO

PROJECT SITE PHOTO

FIGURE 11

PHOTO SOURCE SQUARE ONE FILM & VIDEO

The structure at 401 Folsom was given a rating of "0". Subsequent to the publication of the Rincon Hill Plan Draft EIR (82.39E, June 22, 1985), the Department of City Planning surveyed buildings in the Rincon Hill area for architectural excellence. The survey methodology and 13 evaluation criteria are the same as those employed in rating buildings for Individual or Contextual Importance in the Downtown Plan. However, buildings in the Rincon Hill area are not arrayed in the four-category system contained in the Downtown Plan; the survey makes a distinction between "Significant" and "Contextual" structures. As a result of the survey the Coffin-Reddington Building is rated as "Significant". Figure 12, page 37, shows the location of architecturally significant buildings in the Rincon Hill Special Use District.

The presence of the Sailor's Union of the Pacific, Union 76 tower, and the Hills Brothers tower and painted wall sign provide a visual focal point in Rincon Hill. With the exception of these three buildings, the existing structures in Rincon Hill are generally not visible beyond the buildings and street segments in the immediate vicinity.

The project area is dominated by lowrise industrial buildings of concrete, wood, and brick construction materials which range from two to six floors. The multiple levels of the freeway ramps and the approach to the Bay Bridge encircling Rincon Hill make it a visually distinctive district from a bird's eye view and to travelers on the Bay Bridge. Views of Rincon Hill's surroundings from within the project area are limited by the overhead freeway ramps. The ramps rise above most of the adjoining buildings in the area.

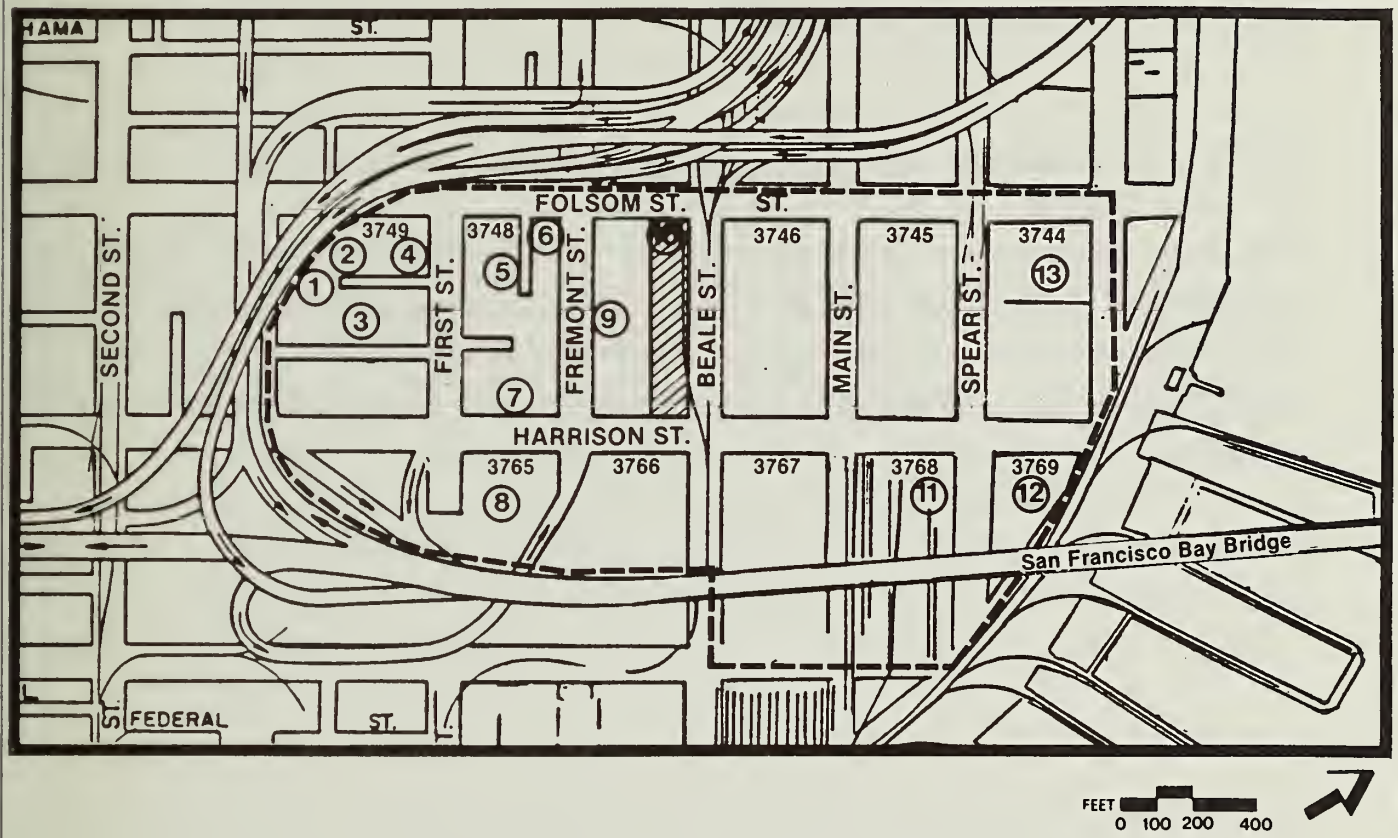
From the corner of Folsom and Beale Streets (the northern end of the project site), views north toward downtown are interrupted by the freeway ramps over which buildings such as 101 California, Pacific Gateway, 211 Main, and part of Embarcadero Center are visible. Views east from this same corner can see the Bay, Treasure Island, part of the Bay Bridge, and the Hills Brothers buildings. Looking south on Beale Street from the corner of Folsom the view encompasses the eight-story warehouse on the east side of Beale, the Harrison Street overcrossing and a section of the Bay Bridge above that (see Figure 10, page 34). The Financial District structures are less obstructed when viewed from Harrison Street. This is partly due to Harrison Street's elevation gain in relation to Folsom Street.

ARCHITECTURALLY SIGNIFICANT BUILDINGS IN THE RINCON HILL SPECIAL USE DISTRICT

FIGURE 12

Project Site

Rincon Hill SUD Boundary



	Address	Block/Lot	1976 DCP Survey	1985 DCP Survey	Heritage
1.	Guy Place Housing*	3749	Not Rated	Not Rated	Not Rated
2.	515 Folsom	3749/53	Not Rated	Contextual	C
3.	66-8 Lansing	3749/47	2	Contextual	C
4.	501 Folsom	3749/1	2	Significant	B
5.	443-47 Folsom (Klockars Blacksmith Shop)*	3748/28	1	Significant	B
6.	401 Folsom	3748/1	0	Not Rated	Not Rated
7.	450 Harrison (Sailor's Union of the Pacific)*	3748/31	4	Significant	Not Rated**
8.	425 First Street (Union Oil Bldg.)*	3765/9	4	Significant	Not Rated**
9.	355 Fremont	3747/6	1	Contextual	C
10.	301 Folsom (Coffin-Reddington)*	3747/1B	Not Rated	Significant	B
11.	400 Spear (Hathaway)*	3768/47	Not Rated	Significant	A
12.	29-35 Harrison*	3769/2A	Not Rated	Significant	A
13.	2-30 Harrison (Hills Bros.)*	3744/1	3	Significant	A

Source: Department of City Planning, Rincon Hill Plan Final EIR, 82.39E, certified July 18, 1985.

* These buildings are encouraged for preservation in the Rincon Hill Plan.

** Heritage ratings apply to structures built before 1945. The Union Oil Building and Sailor's Union of the Pacific were altered and constructed, respectively, after 1945, and are therefore not rated. However, due to the unusual architectural merit of these two buildings, Heritage does note that, had they been formally included in the survey, both would have received "A" ratings.

From Harrison where it crosses Beale, the Bay Bridge can be seen to to the east where it connects with Yerba Buena Island. To the south, beyond the bridge, part of the South Bay and East Bay are visible. Looking west on Harrison Street, the orange, white, and blue Union 76 tower dominates the landscape.

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[1]Chris Nelson, Architectural Historian, Heritage, telephone conversation, April 30, 1985.

[2]"B. Major Importance -- Buildings which are of individual importance by virtue of architectual, historical, and environmental criteria. The buildings tend to stand out for their overall quality rather than for any particular outstanding characteristics. B-group buildings are eligible for the National Register, and of secondary priority for City Landmark status." Splendid Survivors, Charles Hall Page and Associates for the Foundation for San Francisco's Architectural Heritage, California Living Books, 1979, pages 12-13.

C. SHADOW AND WIND

1. Shadow

Existing structures cast shadows on streets and sidewalks in the project vicinity. Open space in the project area includes South Park and Ferry Plaza. Both of these properties are under the jurisdiction of the San Francisco Park and Recreation Commission and are subject to Proposition K, the Park Shadowing Initiative Ordinance. South Park is about two blocks (or 2,000 feet) south of the proposed project; Ferry Plaza is about three blocks (or 2,400 feet) north of the project. The existing shoreline promenade east of the Embarcadero is under the jurisdiction of the Port of San Francisco and the Recreation and Park Department has no plans at this time to acquire this property.[1] The Rincon-Point South Beach Redevelopment Plan encompasses an area southeast of the Rincon Hill plan area. A park would be located along the Embarcadero, between Steuart, Howard and Harrison Street. Currently there are no plans to develop the potential 4½-acre waterfront park site, and any future plans would be dependent on the final outcome of the I-280 Transfer Concept Plan.[2] Existing and project shadow patterns for various times of the day and year are discussed in detail in Chapter IV.C.1., Environmental Impacts, page 71.

2. Wind

U.S. Weather Bureau data show that westerly (i.e. from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco.[3] Of the 16 primary wind directions measured at the Weather Bureau station (at a height of 132 feet), four directions comprise the greatest frequency of occurrence as well as the majority of strong wind occurrences. These are northwest, west-northwest, west and west-southwest, with occurrence rates of about 10%, 14%, 35%, and 2%, respectively, of the time between the hours of 6:00 a.m. and 8:00 p.m. throughout the year. The remaining 12 wind directions comprise the remaining 36% frequency of annual occurrence with lower wind speeds. Calm conditions occur two percent of the time.

Average wind speeds are highest during summer and lowest during winter months. However, strongest peak winds occur in winter, when speeds of 47 mph have been recorded.[4] The highest average wind speeds are in the mid-afternoon, and the lowest are in the early morning.

Between the hours of 7:00 a.m. and 6:00 p.m. on an annual basis, wind speeds measured at the Weather Bureau station exceeded 21, 25, 21, and 18 miles per hour (mph) 10% of the time for northwest, west-northwest, west, and west-southwest winds, respectively, while the 12 remaining wind directions exceeded 15 mph 10% of the time.

a. Pedestrian Comfort and Wind Criteria. Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, high-rise buildings can redirect wind flows around buildings and divert winds downward to street level; each can result in increased wind speed and turbulence at street level.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four mph have no noticeable effect on pedestrian comfort. With winds from four to eight mph, wind is felt on the face. Winds from 8 to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. For winds from 19 to 26 mph, the force of the wind will be felt on the body. At 26 mph to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts can blow people over.[5]

In order to provide a comfortable wind environment for people in the Rincon Hill Special Use District, Section 249.1(b)(3)(A) of the Planning Code establishes an equivalent (includes the effects of turbulence) windspeed (as defined in the Code) of seven and 11 mph as comfort criteria and 26 mph as a wind hazard criterion. Section 249.1(b)(3)(A) sets comfort levels of seven mph equivalent wind speed for public seating areas and 11 mph equivalent wind speed for areas of substantial pedestrian use. New buildings and additions to buildings may not cause ground level winds that would exceed these levels more than 10% of the time year round between 7:00 a.m. and 6:00 pm. year round.[6] If existing wind conditions exceed the comfort level, new buildings and additions shall be designed to reduce ambient wind speeds to meet the requirements.

A building may qualify for an exception to the standard that would allow it to add to the amount of time the comfort level is exceeded by the least practical amount if 1) it can be shown that the building or addition cannot be shaped and other wind baffling measures cannot be adopted to meet the foregoing requirements without creating an unattractive

and ungainly building form and without unduly restricting development of the building site in question, and 2) it is concluded that, because of the limited amount by which the comfort level is exceeded, the limited location in which the comfort level is exceeded, or the limited time during which the comfort level is exceeded, the addition is insubstantial. No building or addition that would cause wind speeds to exceed 26 mph hazard level for more than a single hour of any year would be permitted.

Existing and project generated wind conditions are discussed in detail in Chapter IV, Environmental Impacts, page 71 and Appendix B, p. A-32.

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[1]Timothy Lillyquist, San Francisco Park and Recreation Department, telephone conversation, February 10, 1986.

[2]Barbara Amato, San Francisco Redevelopment Agency, telephone conversation, February 10, 1986.

[3]The U.S. Weather Bureau data used in this analysis were originally gathered at the weather station atop the Old Federal building at 50 United Nations Plaza during the years 1945-50. Data were taken hourly, annually for 16 wind directions. The data base, comprised of 32,795 hourly observations, is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

[4]E. Jan Null, Climate of San Francisco, NOAA Technical Memorandum, NWS WR-126, February 1978.

[5]Lawson, T.V., and A.D. Penwarden 1976, "The Effects of Wind on People in the Vicinity of Buildings," Proceedings of the Fourth International Conference on Wind Effects on Buildings and Structures, London, 1975, Cambridge University Press, Cambridge, U.K., 605-622.

[6]Section 249.1(b)(3)(A) of the Planning Code specifies the hours of 7:00 a.m. to 6:00 p.m. The available weather data that cover that interval cover the hours of 6:00 a.m. to 8:00 p.m. Thus, observation from two additional evening hours and one additional morning hour are included in these data. Because, in general, winds are stronger in the afternoon and evening than in the morning, this approximation is conservative -- it is likely to overestimate the existing and projected wind speeds.

D. TRANSPORTATION

The project site is located in the Rincon Hill area of San Francisco, bounded by Beale, Harrison, Folsom and Fremont Streets (see Figure 1, page 15).

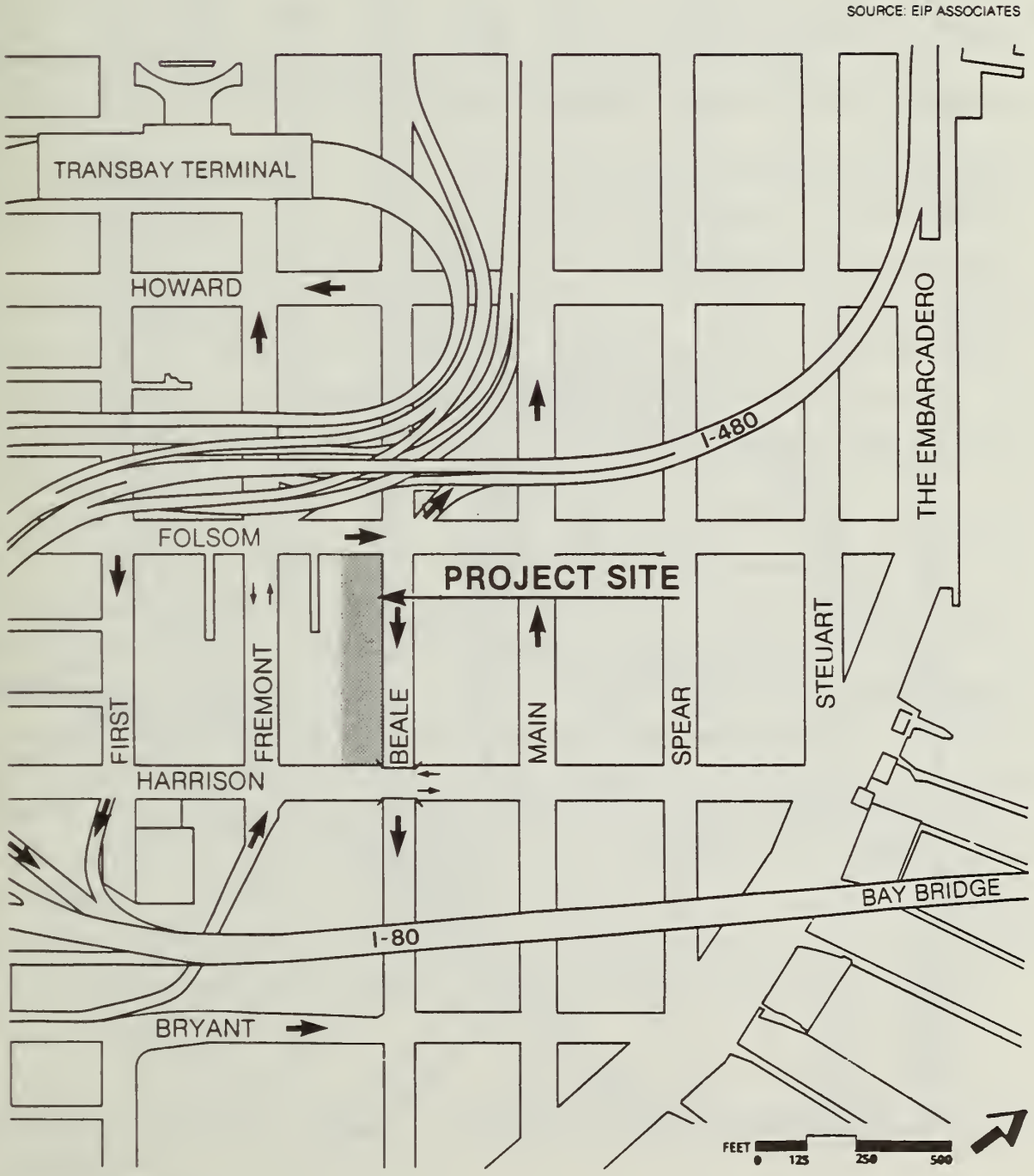
Primary intra-city access to and from the project area would occur on The Embarcadero, Market, Mission, Howard, Folsom, Harrison, First, Fremont, Beale and Main Streets (see Figure 12, page 37). The Embarcadero, Howard, Folsom, Harrison, First and Fremont Streets are designated "Primary Vehicular Streets" in the Transportation Element of the City's Master Plan[1] while Market, Mission, Howard, Folsom, Steuart, Embarcadero, Second and Fremont, are designated "Transit Preferential Streets" in the Downtown Transportation Plan.[2] Beale, Main, and First Streets are designated "Transit Preferential Streets" north of Howard Street. Regional access to and from the East Bay and Peninsula is available via the Bay Bridge and Highway 101 with on-ramps at First/Harrison, Mission/Beale and Bryant/Fremont and off-ramps at Harrison/Fremont and Mission/Main. Traffic to the North Bay generally travels along The Embarcadero. Beale Street is a one way street from north to south, Fremont Street is a one-way street northbound from Folsom to Market Street and a two-way street south of Folsom Street, Folsom is a one-way street eastbound from Eleventh Street to The Embarcadero and Harrison Street is two-way with a grade separation above Beale Street. Figure 13, page 43, shows the existing street network.

Existing Levels of Service (LOS) for intersections in the project vicinity are as follows: Folsom/Beale - B, Bryant/Beale - C, Harrison/First - E, Harrison/Fremont - B.[3] Levels of service are defined in Appendix C, Table C-3, page A-44.

Five Muni routes operate within two blocks of the site (see Figure 14, page 44). The 12 Folsom provides weekday daytime service to Mission and 26th Streets via Folsom Street. The 15 Third operates on Third Street and links the Rincon Hill area to Telegraph Hill area at one end and to Excelsior District and Balboa Park on the other end. The 41 Union links the Rincon Hill area to Russian Hill and Presidio via Columbus and Union Streets. The 42 Downtown loop circulates within the entire downtown area and links the site to Fishermans Wharf area via Van Ness Avenue and makes a loop near the site at Folsom and Fremont Streets. The 80X Gateway Express line runs on Beale Street and provides peak-hour service to Caltrans S.P. Depot. In addition the site is within three blocks of Muni

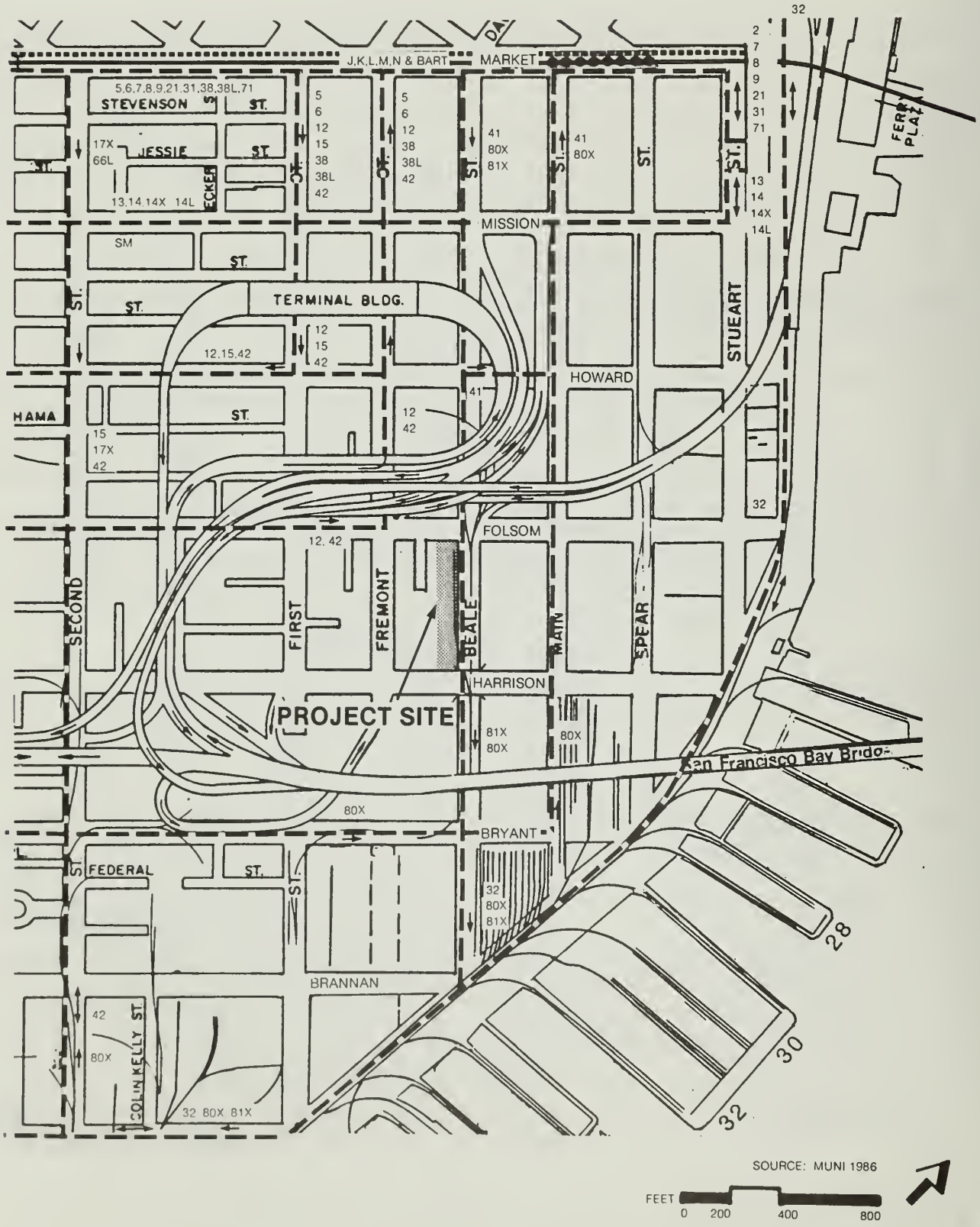
LOCAL STREET NETWORK

FIGURE 13



PUBLIC TRANSPORTATION IN THE PROJECT VICINITY

FIGURE 14



and BART transit services along the Market Street corridor and the Transbay Terminal which serves Golden Gate Transit, SamTrans and AC Transit.

Mission, Howard, Folsom, Second and Third Streets have been designated Bicycle Routes in the Transportation Element of the City's Comprehensive Plan. None of these streets have been striped with bicycle lanes.

Adjacent to the site there are sidewalks along Folsom, Beale and Harrison Streets. The sidewalk along Beale Street is ten feet wide but narrows down to eight feet south of the parking lot adjacent to the Coffin-Reddington Building.

Based on site visits conducted by DKS Associates during three different time periods on a typical weekday (a.m. peak, noon, p.m. peak), the following observations were made:[4]

An existing Southern Pacific railroad track runs along the middle of Beale Sreet and branches off to the US Post Office driveway located across from the project site. The Post Office administration building and warehouses occupy the whole block from Folsom to Harrison Street. Five 90 degree loading docks off Beale Street serve the Post Office warehouse. Fifteen cars were parked at 90 degrees to the Post Office site. On the west side of Beale street, in front of the existing warehouse and the project site, 22 cars were parked parallel to the curb. Both of the existing on-site parking lots (121 existing spaces on-site) were fully occupied by 8:00 a.m. and at noon time. During the a.m. peak hour (7:30-8:30), the pedestrian flow was headed from the public parking lots on Beale Street and points south towards the downtown area, while in the p.m. peak hour (4:30-5:30) the reverse direction of flow was observed. Very little pedestrian acitivity was observed during midday peak hour (12:00-1:00), however at 1:10 p.m. a group of 25 Post Office employees left the building walking towards the downtown area. Vehicular traffic was generally open on Beale Street during all three periods and no significant delay was encountered. A significant amount of carpool and vanpool traffic was observed southbound on Beale Street during the p.m. peak hour, making a right turn into Bryant Street in order to use the carpool lane which leads to the Bay Bridge on-ramp.

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[1] Primary Vehicular Street is defined as a crosstown thoroughfare whose primary function

is to link districts within the City and to distribute traffic from and to the freeways, a route generally of citywide significance. Department of City Planning, City and County of San Francisco, Transportation: An Element of the Master Plan, January 1983.

[2]Transit Preferential Street is defined as an important street for transit operations where interference with transit vehicles by other traffic should be minimized. SOURCE: Transporation: An Element of the Master Plan, Department of City Planning, City and County of San Francisco, January 1983.

[3]Counts conducted by EIP Associates and DKS Associates, April 1985.

[4]Site visits made by DKS Associates in April 1985.

E. AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O_3), carbon monoxide (CO), total suspended particulates (TSP), lead (Pb), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). On the basis of the monitoring data, the Bay Area, including San Francisco, currently is designated a non-attainment area with respect to the federal ozone and CO standards. A four-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about 2.5 miles southeast at 900 23rd Street) is shown in Appendix D, page A-50, together with the corresponding federal and/or state ambient air quality standards. In 1984, there was one violation of federal and state ozone standards, one violation of federal and state eight-hour CO standards and five violations of the previous state 24-hour TSP standard; in 1983, there was one violation of the federal and state one-hour average ozone standards and four violations of the previous state 24-hour average TSP standard; and in 1982 there was one violation of the federal and state eight-hour CO standard, and three violations of the state 24-hour average TSP standard.[1]

BAAQMD has conducted two CO "hotspot" monitoring programs in the Bay Area, including San Francisco. One CO monitoring program was conducted during the winter of 1979-80 and included the intersection of Washington and Battery Streets in San Francisco, about three miles east of the site.[2] The high eight-hour average concentration was 10.1 ppm, which violates the 9-ppm state and federal standards by 1.1 ppm. The high one-hour average concentration of 15 ppm does not violate the 20-ppm state standard or the 35-ppm federal standard. Another CO monitoring program was conducted during the winter of 1980-81 and included the San Francisco intersections of Geary and Taylor Streets, about 1.5 miles east of the site, and at 100 Harrison Street at Spear, about 2 blocks southeast of the site.[3] At Geary and Taylor the observed high eight-hour average concentration was 11.5 ppm, which violates the standards by 2.5 ppm and the high one-hour concentration was 15 ppm which does not violate the standards. At Harrison Street the observed high eight-hour and one-hour average concentrations were 7.8 ppm and 13 ppm, respectively, which do not violate the standards. These data indicate that locations in San Francisco near streets with high traffic volumes and congested flows may experience violations of the eight-hour CO standard during adverse meteorological conditions. In December 1985, the City monitored CO and counted traffic at the Sixth and Brannan intersection. The data are still being analyzed.

Comparison of these data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all the developed portions of the Bay Area. Three of the four prevailing winds, west, northwest and west-northwest, blowing off the Pacific Ocean reduce the potential for San Francisco to receive pollutants from elsewhere in the region.

San Francisco's air quality problems, primarily CO and TSP, are due largely to pollutant emissions from within the City. CO is a non-reactive pollutant and its major source is motor vehicles. CO concentrations are generally highest during periods of peak traffic congestion. TSP levels are relatively low near the coast, increase with distance inland, and peak in dry, sheltered valleys. The primary sources of TSP in San Francisco are demolition and construction activities, and motor vehicle travel over paved roads.

San Francisco contributes to regional air quality problems, including ozone, which affect other parts of the Bay Area. Ozone is not emitted directly from sources, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbon (HC) and nitrogen oxide (NOx) emissions, which are carried downwind as photochemical reaction occurs. Ozone standards are exceeded most often in the Santa Clara, Livermore, and Diablo Valleys, because the local topography and meteorological conditions favor the build-up of ozone and its precursors.

In 1982, motor vehicles were the source of 86% of the CO, 46% of the hydrocarbons (HC), 44% of the TSP, and 56% of the nitrogen oxides (NOx) emitted in San Francisco, while power plant fuel combustion was the largest single source of sulfur oxides (SOx), about 33% of the total.[4] These percentages are expected to apply reasonably well to current conditions.

In response to the Bay Area's ozone and CO nonattainment designations, the Association of Bay Area Governments (ABAG), BAAQMD, and the Metropolitan Transportation Commission (MTC) prepared and adopted the 1982 Bay Area Air Quality Plan, which establishes pollution control strategies to attain federal ozone and CO standards by 1987 as required by federal law.[5] These strategies were developed on the basis of detailed subregional emission inventories and projections, and mathematical models of pollutant behavior, and consist of stationary and mobile source emission controls and transportation

improvements. The BAAQMD, MTC, and California Bureau of Automotive Repair (a state agency) have primary responsibility for implementation of these strategies.

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[1]State standards for particulate matter changed in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. Concentration standards also changed. There is not yet an adopted method for monitoring fine particulate matter. Until the State adopts a method, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards.

[2]Association of Bay Area Governments, AQMP Tech Memo 33, "Summary of 1979/1980 Hotspot Monitoring Program," Berkeley, California, June 1980.

[3]Association of Bay Area Governments, AQMP Tech Memo 40, "Results of the 1980/1981 Hotspot Monitoring Program for Carbon Monoxide," Berkeley, California, January 1982.

[4]Bay Area Air Quality Management District (BAAQMD), "Base Year 1982 Emissions Inventory Summary Report," San Francisco, California, November 1, 1982.

[5]Association of Bay Area Governments (ABAG), BAAQMD and MTC, 1982 Bay Area Air Quality Plan, Berkeley, California, December 1982.

IV. ENVIRONMENTAL IMPACTS

An application for environmental evaluation for the project was filed on February 15, 1985. On February 14, 1986, on the basis of an Initial Study, the Department of City Planning, Office of Environmental Review, determined that a tiered Environmental Impact Report was required. Issues determined as a result of the Initial Study to require no further environmental analysis include: Light and Glare, Cumulative Population (Employment and Housing), Operational Noise, Construction Air Quality, Utilities/Public Services, Biology, Geology/Topography, Water, Hazards, and Cultural Resources. Therefore, this document does not discuss these topics (see Appendix A, p. A-2 to A-31, for the Initial Study).

This tiered EIR has been prepared for the project pursuant to Sections 21093 and 21094 of the California Environmental Quality Act (CEQA). The EIR is tiered from the EIR for the Rincon Hill Plan (82.39E, Final EIR certified July 18, 1985). The 300 Beale Street EIR analyzes project-specific impacts. It discusses potentially significant effects of the project that were not examined in the Rincon Hill Plan EIR and includes applicable mitigation measures for site-specific effects. The analysis identifies the project portion of the relevant cumulative impacts forecast in the prior EIR. The Rincon Hill Plan EIR, from which this later single-project EIR is tiered, includes about 100 pages of Comments and Responses to those comments. The Rincon Hill Plan Final EIR was certified July 18, 1985.

The Rincon Hill Plan Final EIR (RHPFEIR) analyzed potential cumulative impacts from full build-out within the Rincon Hill Plan area as an addition to city-wide cumulative impacts analyzed in the Downtown Plan EIR (see RHPFEIR, at pp. 74-75). As stated in the RHPFEIR at page 74, it is not anticipated that full build-out would occur within the Rincon Hill Plan area within the forseeable future. Additionally, the city-wide cumulative impact analysis in the Downtown Plan EIR included impacts from development

within the Rincon Hill Plan area. Therefore the cumulative analysis in the RHPFEIR provided a conservative impact analysis.

The current validity, or "freshness" of the information contained in the cumulative impact analysis of the RHPFEIR is inherent in the fact that i) the EIR was certified by the City Planning Commission less than one year ago (July 18, 1985) as being adequate, accurate and objective; and ii) the RHPFEIR provided a conservative impact analysis by assuming full build-out and double-counting (to a certain extent) development within the Rincon Hill Plan area.

The Rincon Hill Plan, itself, was adopted by the Planning Commission on July 18, 1985 and permanent controls to implement the Rincon Hill Plan are now a part of the City Planning Code (Section 249.1) and it is still anticipated by the Department of City Planning that full build-out within the Rincon Hill Plan area will not occur within the foreseeable future. Hence, the RHPFEIR still provides cumulative impact analysis for a greater amount of development than is actually anticipated within the Rincon Hill Plan area.

To the extent that the RHPFEIR cumulative impact analysis relies on the Downtown Plan EIR (DTPEIR) cumulative impact analysis, that analysis is also currently valid. The validity of the DTPEIR assumptions and analysis was recently established in the Final EIR for 235 Pine Street (84.432E, certified April 17, 1986). The material contained in the 235 Pine Street Draft Summary of Comments and Responses, at pp. 9-21, 25-30, 32-38 and 54-59 is summarized below and incorporated by reference herein.

The 235 Pine Street Comments and Responses discuss the current validity of the Downtown Plan EIR assumptions and analysis with regard to development and land use forecasts, employment growth, transportation impacts, office rental and vacancy rates and housing production. The DTPEIR forecasts are considered to be long-term forecasts that focus on the amounts and types of growth expected through the year 2000. No attempt was made to forecast on an annual or short-term basis, and the long-term forecasts include a number of shorter-term ups and downs which average out over time. In general, it was concluded that no new data or information are available that would indicate that the long-term forecasts prepared for the DTPEIR are substantially off-target or misleading. With regard to the more specific issues such as transportation impacts, office vacancy rates, housing impacts, etc., it was concluded that the assumptions in the DTPEIR remain valid and the analysis remains current.

Thus, for example, it was concluded that the recent drop in gasoline prices in early 1986 was temporary and would not cause long-term shifts in mode split from transit to auto use. This is due not only to the temporary nature of the gas price drop (as of June, 1986, prices are on the increase again) but also to the fact that bridges and freeways providing access to San Francisco were generally at or near capacity during the p.m. peak at the time the DTPEIR baseline analyses were done, and are expected to continue to be at or near capacity, with increases in peak-of-the-peak over time (235 Pine Comments and Responses, p. 26; DTPEIR Vol. I, pp. IV.E. 32 & 34). While driving may temporarily appear attractive to some commuters, length of time of commute would deter others or cause shifts to carpools or transit by other drivers in the "push-pull" relationship between traffic congestion and transit ridership (see 235 Pine Comments and Responses, p. 27).

It was also concluded that housing completions in San Francisco were about 940 units in 1983-84 and about 1,000 units in 1985. These figures fall squarely within the DTPEIR forecast of 600-1,500 units per year on average (235 Pine Street Comments and Responses, p. 54). Similarly, the recent increase in office vacancy rates was forecast in the DTPEIR which anticipated that space approved in the mid-late 1980's would not be absorbed by 1990 (see 235 Pine Street Comments and Responses, pp. 21 and 34; DTPEIR Vol. 1, pp. IV.B. 23-29; Vol. III, Part 1, pp. C&R-B. 10-11).

Comments on this single-project EIR for 300 Beale Street are to be confined to those matters analyzed in this EIR, related to project-specific effects and the relation of this project to relevant cumulative impacts. Insofar as the Rincon Hill Plan EIR is a final, certified document, it would be inappropriate to reopen the EIR process by accepting further comments on that EIR. Therefore, comments on material contained in the prior EIR from which this project-specific EIR is tiered will not be accepted.

Some of the effects presented in this Impacts Chapter are not physical effects as defined by CEQA. They are included in the EIR for informational purposes only.

As discussed in the Initial Study, the project would be consistent with the Rincon Hill Plan policies and ordinances for which a Final EIR (82.39E) was certified July 18, 1985. The project's consistency with these local land use plans and zoning meets the CEQA requirements for a tiered EIR.

A. LAND USE AND ZONING

The following two paragraphs summarize the material from the Rincon Hill Plan Final EIR (82.39E, certified July 18, 1985). This summarized material is found on the following pages of the Rincon Hill Plan Final EIR, which are incorporated herein by reference:

Final EIR, pp. 3-4, 25-34, 74-79, 95-97.

The Rincon Hill Final EIR analyzed the impacts from full build-out pursuant to the Rincon Hill Plan, while acknowledging that such an approach was conservative, since full build-out was not anticipated to actually occur. No specific timeline for full build-out was used.

As identified in the Rincon Hill Plan Final EIR, development pursuant to that Plan could result in a shift from industrial, commercial, office and social service uses to mixed-use residential development. An estimated maximum range of 3,700 to 6,800 new residential units and 677,000 to 931,000 gross square feet of new commercial space was identified for the portions of the Rincon Hill Plan area that were proposed for rezoning. Up to 13,400 net new employees (15,100 total) could be located in the Rincon Hill Plan area at maximum build-out.

The Rincon Hill Plan Final EIR is available for review at the Department of City Planning, the San Francisco Main Library, and various branch libraries.

1. Land Use

One land-use change resulting from the proposed project would be the conversion to office space in Phase I. Phase II would introduce residential, retail and open space uses. Both phases of the project would continue the recent trend of diversification of land uses from light industrial to residential, office and retail. The major land use change anticipated for the entire Rincon Hill plan area is a shift from industrial, commercial, office and social service uses to mixed-use residential/commercial development in Subareas One and Two. The 300 Beale Street project (as well as other projects with applications on file at the Department of City Planning) which is part of this trend, was considered in the overall land use impact analysis in the Rincon Hill Plan EIR (pp. 25-32, 76-78, 133).

The proposed project would increase the density of development on the site, adding about 128,536 gsf of office space, 178,650 gsf of residential uses, 2,200 gsf of retail space and

parking and open space uses. The number of workers employed at the site and the number of residents living onsite would represent a new transient and permanent population.

As one of the first manifestations of the Rincon Hill Plan, the project could encourage similar development of other residential and commercial uses allowed by the Plan. Hills Plaza, a mixed-use office/retail/residential project located three blocks east of the proposed project was approved by the Board of Permit Appeals in April, 1986. 59 Harrison, an office conversion project three blocks from the project site, was also recently approved by the Planning Commission. Development of the project in this area would be consistent with the provisions of the Rincon Hill Plan which identify this area as one suitable for residential and commercial projects.

2. Relationship to the Master Plan

Rincon Hill Plan

Both phases of the proposed project would respond to the objectives and design controls contained in the Rincon Hill Plan. The Phase I office building would be located in the proposed Commercial/Industrial district of the plan area. Phase II would be located in the residential portion of the plan. Retention of the Coffin-Reddington Building is specifically called for in the Rincon Hill Plan.

The combination of residential, office, commercial and parking would comply with the "mutually supportive mix of uses" called for by the Rincon Hill Plan. Office uses would provide daytime support for the services and stores that the new housing would require and would form a buffer between the freeway to the north and the residential uses. The proposed project would respond to the land use and housing objectives and policies contained in the Rincon Hill Plan. Phase II with 200 dwelling units, would be part of a "unique residential neighborhood close to downtown which will contribute significantly to the City's housing supply."[1] Amenities such as open space, the pedestrian alleyway, and floorplan design of the residences are intended to result in a quality neighborhood as envisioned by the Rincon Hill Plan.

Assessor's Block 3747, the project block bounded by Beale, Fremont, Folsom and Harrison Streets, is also the subject of specific improvements contained in the Rincon Hill Plan. Public open space in the form of wider sidewalks, decorative paving, lighting, seating and

trees is recommended for Beale Street between Harrison and Folsom. Block 3747 is also seen as an element in the Plan's east-west circulation system to be created in the middle of the long blocks between Folsom and Harrison Streets. The 300 Beale Street project would incorporate many of these features; lighting, seating, trees and decorative pavement are included in the proposed project, pursuant to Section 249.1(b)(2)(A). Sidewalks would be installed. Wider sidewalks, which would involve narrowing of a public street, are classified as open space in the Rincon Hill Special Use District Implementing Ordinance but would require approval from both the City Planning Commission and the Department of Public Works. The proposed project would not require sidewalk widening to fulfill its open space requirements (see pages 57 and 59, below). Nevertheless, sidewalk widening remains under consideration by the project sponsor as a mitigation measure (see page 111). (See below for a discussion of the project's contribution to the east-west alley system.) The proposed project would respond to the recreation and open space objectives set forth in the plan; more than 20% of the site area would be either publicly accessible open space or improvements that would count toward the requirement such as decorative pavement, lighting, seating and trees.

The Plan calls for the creation of an east-west alley system that would divide some of the blocks in the area and promote access and circulation. For Assessor's Block 3747 (the project block) the Rincon Hill Plan states: "Pedestrian access is required across this block at grade, but vehicular access is optional."[1] The 300 Beale Street project sponsors would provide part of the called-for alley from Beale Street to the rear of the site. Until the development of properties on Fremont Street that could link it with Beale Street, the alley would function as a plaza, landscaped and open to the public.

Residence Element

The Residence Element identifies Rincon Hill as an area for mixed residential and commercial development. As a major residential/office development proposed for the Rincon Hill area, the 300 Beale Street project would be responsive to the Residence Element. The project's proposed 200 housing units would partly address Objective 1 of this Element, which seeks to "provide new housing for all income groups in appropriate locations." Market conditions would determine the ultimate rental or selling price of the units. The Phase II housing would be responsive to Objective 2, Policy 2 which seeks to "encourage higher residential density areas adjacent to downtown and in neighborhood commercial districts where higher density will not have harmful effects."

Commerce and Industry Element

Objective 2 seeks to "maintain and enhance a sound and diverse economic base and fiscal structure for the City." The proposed project would be part of a plan to strengthen and broaden the tax base by adding new residential and commercial uses to an area whose industrial base has dwindled over the years. The proposed 300 Beale Street project would, specifically, convert a vacant warehouse to an office building and replace a surface parking lot with 200 residential units and commercial uses.

3. Zoning

The ordinance amending the Master Plan and Planning Code to establish the Rincon Hill Plan Special Use District provides regulation of uses, height, bulk, setbacks, site coverage, open space, parking, changes in non-conforming uses, and building design. These requirements are discussed in Chapter III.A, pages 26-32, and the project's relation to them is discussed below. The project's relationship to other policies of the Rincon Hill Plan regarding urban design, recreation and open space and preservation is discussed in Chapter IV.B., pages 60-69. Wind impacts are discussed in Chapter IV.C.2., pages 78-80.

a. Phase I

Offices are principal permitted uses in an M-1 (Light Industrial) District. The Phase I site is in a 200-R Height and Bulk District which allows a maximum building height of 200 feet. The existing building is 66 feet high and no height increase is proposed. The existing length of the building is 238 feet and the diagonal dimension is 267 feet. The zoning controls established by the Rincon Hill Plan Implementing Ordinance establish 200 feet as the maximum allowable plan dimensions (length and diagonal), between a height of 51-105 feet. The existing building exceeds these length and diagonal dimensions by 38 feet and 67 feet, respectively. Nevertheless, pursuant to Section 172(b), the additions to the existing building would not increase any existing discrepancies between existing conditions on the lot and the required standards for new construction (additions are all internal), and the Phase I renovation would therefore be permissible with regard to height and bulk controls.

The basic allowable floor area ratio (FAR) in an M-1 District is 5:1, permitting development of a total gross floor area five times the area of the site. Using a site area of 34,375 (Lot 1B) and not including Phase II, the proposed Phase I office conversion would have an FAR of about 3.7:1.

Sections 249.1(b)(1)(A) and (D) state that site coverage for new buildings is limited to 80% and that the portion of the site not covered pursuant to that section cannot be used for parking, storage or freight loading. Phase I, an existing building, covers about 76% of the site. The off-street loading area would occupy about 1% of the site, leaving about 23% of the site for open space uses.

Phase I of the proposed project is required, pursuant to Section 249.1(d)(1)(A), to provide one square foot of publicly accessible open space per 50 square feet of gross floor area. Phase I would provide 128,536 gsf of office space, which yields an open space requirement of 2,571 square feet. Phase I would provide 7,780 square feet of open space in a plaza located between the Phase I main entrance and Phase II (see Figure 5, page 21). The area would be landscaped with trees and shrubs and seating would be installed.

Pursuant to Section 249.1(d)(2), Phase I would be required to provide parking at a rate of one space for each 1,000 square feet of occupied floor area. The 119 spaces for which Phase I is responsible for would ultimately be provided in the garage of Phase II. Prior to the construction of Phase II the parking spaces would be provided on the site of the existing parking lot, which would then be considered an accessory use to the Phase I office development. Section 159(c) of the Planning Code permits required off-street parking to be located within 800 feet of the use served.

Section 152 of the Code requires two off-street loading docks for the entire project (Phases I and II). The loading area for Phase I would be provided off Beale Street, adjacent to the public plaza as shown in Figure 5, page 21. The area would be about 360 square feet and would occupy about 1% of the Phase I site as discussed above.

b. Phase II

The Phase II site is in an RC-4 (Residential Commercial Combined, High Density) District and has a 150-foot height limit. The height would be measured from a point on Harrison Street which is about 50 feet above Beale Street. From that point to the roofline the height would be 150 feet; a mechanical penthouse would extend 16 feet above this. Bulk limits as set forth in Section 270(c) of the Planning Code would apply to the Phase II residential tower. The project site is in an R Bulk District in which between a building height of 51 and 105 feet the maximum plan dimensions measured longitudinally and

diagonally may not exceed 200 feet. Between a height of 51-105 feet (measured from Harrison Street) the Phase II structure would have a length of 147 feet and a diagonal dimension of 158 feet. The average individual floor area within this range is limited to 20,000 gross square feet; the proposed project would have an average floor area of 11,017 gsf. Above 105 feet various measurements apply that would reduce the bulk of the structure and create a tapered form. Above a height of 105 feet the maximum allowable building length is limited to 110 feet and the maximum diagonal may not exceed 125 feet, generally. The length of Phase II above 105 feet would be 94 feet and the diagonal dimension would be 107 feet. Furthermore, "the volume of the upper one-third of the structure above 105 feet shall be at least 15% less than the volume of the middle one-third above 105 feet, and the volume of the lower one-third of the structure above 105 feet shall be at least 15% more than the volume of the middle one-third above 105 feet" (Section 270(c)(3)).

The Phase II structure has six floors (floors 17-22) above 105 feet to which the Code would apply. The middle one-third of the tower (floors 19 and 20) would have an actual floor area of 6,370 gsf (12,740 for the two floors combined). Therefore, the permissible volume of the lower one-third would be 14,651 gsf (12,740 x 1.15 = 14,651). The permissible volume of the upper one-third would be 10,829 gsf (12,740 x .85 = 10,829). The volume of the lower one-third above 105 feet would be 12,740 gsf. The volume of the upper one-third above 105 feet would be 11,110 gsf (6,370 gsf + 4,740 gsf = 11,110 gsf). Hence, the upper one-third would exceed the volume requirement by 281 gsf and would require Conditional Use authorization.

The street frontage of the Phase II structure would extend about 272 feet along Beale Street. Commercial uses, parking garage entrance/exit, stairways to the townhouses, garages serving the townhouses, and loading bays would occupy the street frontage. The building entrances and display windows would comprise about 51% of the total building facing the street, satisfying Section 249.1(c)(1)(C). The ratio of residential uses to other uses (defined as commercial/retail), prescribed by the Code at a minimum 6:1 ratio, would be 81:1.

Pursuant to Section 249.1(c)(3), a minimum of 50% of the building frontage must be set back a minimum of 25 feet from the property line, above 50 feet. The entire Harrison Street frontage of the Phase II structure would be set back 25 feet. 112 feet of the 198-

foot Beale Street frontage would be set back 25 feet at the top fifth level which is about 50 feet high from Beale Street.

The Phase II structure would cover 90% of the site, more than the maximum of 80% allowed by Code. Section 249.1(b)(1)(B), however, allows exception to the limit if the building is on a sloping site and if site coverage above 50 feet does not exceed 80%. The Phase II site slopes, and site coverage above 50 feet would be 29%. Conditional Use authorization would be required.

Open space, to be provided at the ratio of one square foot per 13 square feet of gross floor area of dwelling units, could be either private, common, or publicly accessible open space, as defined in Section 249.1(c)(4)(B) of the Planning Code. No more than 40% of the open space requirement may be met with private usable open space. Phase II of the proposed project would have an open space requirement of 13,742 square feet and would provide a total of 29,640 gsf of open space of which 1,860 square feet, or 6.2% would be private open space and 17,460 square feet, or 59%, would be common open space. Common open space would consist of a recreation deck to the rear (west) of the residential tower and a landscaped terrace on the north end of the residential structure overlooking the public plaza/alley. 10,320 square feet of publicly accessible open space (34.8% of the total open space) would be provided by the ground level pedestrian plaza/alley, the elevated public walk from Harrison to Beale and the public overlook, located midblock facing Beale Street.

The Code calls for one parking space for each dwelling unit. 200 parking spaces reserved for the residential units would be provided in five garage levels located in the base of Phase II. The Phase II retail space requires two parking spaces as per Section 249.1(d)(2). These spaces would be included in the Phase II structure, as would the 119 spaces required by the Phase I office. The parking structure would also include two freight loading spaces resulting in three for the entire project, exceeding the requirement of two such spaces.

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[1] San Francisco Department of City Planning, Rincon Hill Plan, A Part of the Master Plan, adopted by the City Planning Commission on July 18, 1985, pages 14 and 27.

B. URBAN DESIGN AND VISUAL QUALITY

Phase I of the proposed project would rehabilitate and convert the Coffin-Reddington building into office space. The building would be preserved essentially intact, as recommended by the Rincon Hill Plan. Phase II would replace a surface parking lot with a building stepping up to a total of 22 stories, from Beale Street.

The basic design of Phase I and Phase II of the proposed project follows guidelines recommended by the Department of City Planning for the Rincon Hill Plan.[1] The height and bulk of the Phase II residential/parking tower would relate to specific design controls of the Rincon Hill Plan (discussed in Section IV.A., pages 53-59. The relationship of the proposed project to urban design policies of the Rincon Hill Plan is shown in Table 2, pages 61-62.

The Urban Design Element of the San Francisco Comprehensive Plan contains policies and principles which may be used to evaluate the project. The relationship of the proposed project to the Urban Design Element is compared in Table 3, pages 63-64.

The proposed project would affect views of the City and the residential tower would become a new element in the skyline. Figures 15-19, pages 65-69. show views of the proposed project from several vantage points. With full buildout of the Rincon Hill Plan, the proposed project would be part of a group of new forms and heights. The Rincon Hill Plan Final EIR (82.39E) certified July 18, 1985, describes the visual impacts of full buildout:

> "Buildout of the proposed Plan would alter the San Francisco skyline, especially as viewed from the east. Development in the Rincon Hill area would block existing views of the Bay from lower development immediately to the west and south. Views from lower floors of the highrises to the north would be affected. Motorists viewing Rincon Hill development from the Bay Bridge and Embarcadero Freeway would see a skyline composed of residential towers and office buildings of lesser height to the south of the area presently containing highrise development, with views of the downtown and the city beyond." (Rincon Hill Plan Final EIR, pp. 80 and 84.)

Full buildout of the Plan, as described in the Final EIR, was based on a zoning envelope that allowed development of more floor area than currently permitted by the subsequent Special Use District. For instance, the maximum height limit allowed currently is 250

TABLE 2

RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN, RECREATION AND OPEN SPACE AND PRESERVATION OBJECTIVES AND POLICIES OF THE RINCON HILL PLAN AND THE PROPOSED PROJECT

o The highest towers should be clustered near the top of the hill with heights stepping down as elevation decreases. The overall form should identify the hill as a distinctive geographic feature of the City.	The Phase II residential tower would be within the height limit (measured from Harrison Street) recommended by the Rincon Hill Plan which clusters the high-rise structures (200-250 feet) at the top of the Hill, along the south side of Folsom Street and along Harrison Street, west of Beale Street.
o Heights of towers should be varied to avoid the visual benching created by a number of buildings whose tops are at the same elevation.	The residential tower would step down from Harrison Street toward the Center of the site. The podium of Phase II would be similar in height to the Phase I building.
o Towers should be sited in a way that avoids excessive screening of downtown views from the bridge and minimizes shadowing of open space. Therefore, distances between towers in the same height district above 105' should not be less than approximately 150 feet.	The Phase II structure would be visible from the Bay Bridge. From moving automobiles, this view would be brief, depending on speed, and much of the view would be blocked by the guardrail, depending on the height of the vehicle. The proposed project would not cast a shadow on any open space other than that included in the project itself (see Section IV.C.1., page 71). The proposed Phase II structure would contain only one "tower" element.
o Building forms should minimize the creation of surface winds near the base of buildings.	The proposed project would affect wind speeds in and around the site. The 11 mph pedestrian comfort criteria would be met at all locations tested. At the 10 measurement locations within seating areas created by the project, winds would be below the 7 mph criterion at 4 locations, would equal the criterion at 4 locations, and would exceed it at 2 locations. (See Section IV.C.2., page 78).

TABLE 2 continued

o To develop facilities for passive and active recreation serving residents, employees and visitors.	The proposed project would provide private and common open space for residents. A large public plaza located between Phase I and Phase II would serve residents, employees and visitors.
o To create publicly accessible scenic overlooks and viewing areas.	A public overlook oriented toward the Bay could be reached by a public walkway from Harrison Street or from the street-level plaza on Beale Street.
o To create an inviting and pleasant pedestrian corridor to the Financial District.	Improvements to the Beale Street frontage between Harrison and Folsom, such as sidewalks, street trees and lighting would contribute to making at least part of the pedestrian journey a pleasant experience.
o To preserve and adaptively reuse those buildings in the area which have particular architectural or historical merit or which provide a scale and character of development consistent with the Plan.	The proposed project would preserve and adaptively reuse the Coffin-Reddington Building (Phase I).

Source: Rincon Hill Plan, a Part of the Master Plan; and EIP Associates.

TABLE 3

RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE MASTER PLAN AND THE PROPOSED PROJECT

APPLICABLE URBAN DESIGN POLICIES	
A. Policies for Conservation	
Policy 4. "Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development." (p. 25)	The project would preserve the Coffin-Reddington Building and convert it to office space. Retention of this building would provide continuity with older buildings in the area.
B. Policies for City Pattern	
Policy 1. "Recognize and protect major views in the City, with particular attention to those of open space and water." (p. 10)	Development of the Phase II residential tower would affect some views of the downtown area from the Bay Bridge. The project would not affect the Harrison Street view corridor that includes the span of the Bay Bridge from its City anchorage to Yerba Buena Island.
Policy 3. "Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts." (p. 10)	The residential tower, along with the Union 76 tower and the landmark Hills Brothers building would provide a visual focus to the Rincon Hill area. With the exception of these structures, Rincon Hill is currently dominated by low-rise industrial buildings. The height reclassifications proposed in the Rincon Hills Plan would raise the existing 105 ft. height limit of the area to heights ranging from 200 to 250 ft. near the top of Rincon Hill, with 84 and 105 ft. height limits at locations extending east towards the Bay.
Policy 6. "Make centers of activity more prominent through the design of street features and by other means." (p. 12)	As a major mixed-use development South of Market and in the Rincon Hill area, the project would provide an activity center for these areas. The mid-block plaza accessible to the public, would encourage pedestrians to use this mid-block access and on-site retail uses. Eventually the plaza could be connected to a series of through-block pedestrian alleys that would lead from the Embarcadero to the top of the hill at First Street.

TABLE 3 (cont.)

C. Policy for Major New Development	
Policy 5. "Relate the height of buildings to important attributes of the City pattern and to the height and character of existing development." (p. 36)	The Phase II residential tower would be taller than most of the existing development. The building would be stepped down in the direction of the existing building, contributing to a more gradual transition between the building heights. The height would be consistent with that called for in the Rincon Hill Plan.
Policy 13. "Improve pedestrian areas by providing human scale and interest." (p. 57)	The project would provide neighborhood-serving commercial space, intended to serve residents as well as daytime employees. The blocks currently in the Rincon Hill area are quite large and do not accommodate a residential scale. If development within the Rincon Hill Plan area occurs as planned, the mid-block plaza would become part of a pedestrian network in Rincon Hill, intended to enhance the residential scale for pedestrians. The project would provide new public open space on-site in an area that is currently deficient in open space. The plaza would be landscaped and pedestrian amenities provided.

Sources: San Francisco Department of City Planning, Urban Design Element, a part of the Master Plan; and EIP Associates.

VIEW OF PROJECT FROM BEALE STREET LOOKING SOUTH

FIGURE 15

PHOTOMONTAGE WALTER THOMASON & ASSOCIATES
PHOTO SOURCE SQUARE ONE FILM & VIDEO

VIEW OF PROJECT FROM BEALE AND FOLSOM INTERSECTION

FIGURE 16

PHOTOMONTAGE WALTER THOMASON & ASSOCIATES
PHOTO SOURCE: SQUARE ONE FILM & VIDEO

85003

VIEW OF PROJECT FROM THE EMBARCADERO LOOKING WEST ON HARRISON STREET

FIGURE 17

PHOTO SOURCE SQUARE ONE FILM & VIDEO
PHOTOMONTAGE WALTER THOMASON & ASSOCIATES

VIEW OF PROJECT FROM FOLSOM STREET LOOKING SOUTHWEST

FIGURE 18

PHOTO SOURCE SQUARE ONE FILM & VIDEO
PHOTOMONTAGE WALTER THOMASON & ASSOCIATES

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VIEW OF PROJECT FROM WESTBOUND ON BAY BRIDGE

FIGURE 19

PHOTOMONTAGE WALTER THOMASON & ASSOCIATES
PHOTO SOURCE SQUARE ONE FILM & VIDEO

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feet; the original plan would have permitted 400 feet. As stated in the Rincon Hill Plan Final EIR on page 74, that impact analysis examined "what would happen assuming full build-out, although it is not anticipated that this level of development would occur within the foreseeable future." The Rincon Hill Plan Final EIR contains views of buildout pursuant to the original plan on page 83 of the FEIR, and in C&R Figures C&R 2-26.

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[1] San Francisco Department of City Planning, Rincon Hill Plan, A Part of the Master Plan,

C. SHADOW AND WIND

1. Shadow

Shadow patterns for existing and proposed buildings in the project area are shown for 10:00 a.m., noon, and 3:00 p.m. for the four seasons: during winter and summer solstices when the sun is at its lowest and highest and during the spring and fall equinoxes when the sun is at its midpoint. (See Figures 20 through 23, pages 72 through 75.) Conditions from July through November mirror the conditions from January through May (using solar time). The analysis includes shadows cast on streets, sidewalks, pedestrian areas, and open space in the area potentially affected by the proposed project. A shadow outline of the project as though cast on a flat plane is shown to illustrate the scale of the project in relation to the structures that would surround it. Shadows that would be cast on building rooftops are not shown. The diagrams show existing and proposed building shadows and net new shadow due to the project. Phase I of the proposed project is an existing building, therefore, the following discussion relates primarily to the impacts that would be caused by Phase II.

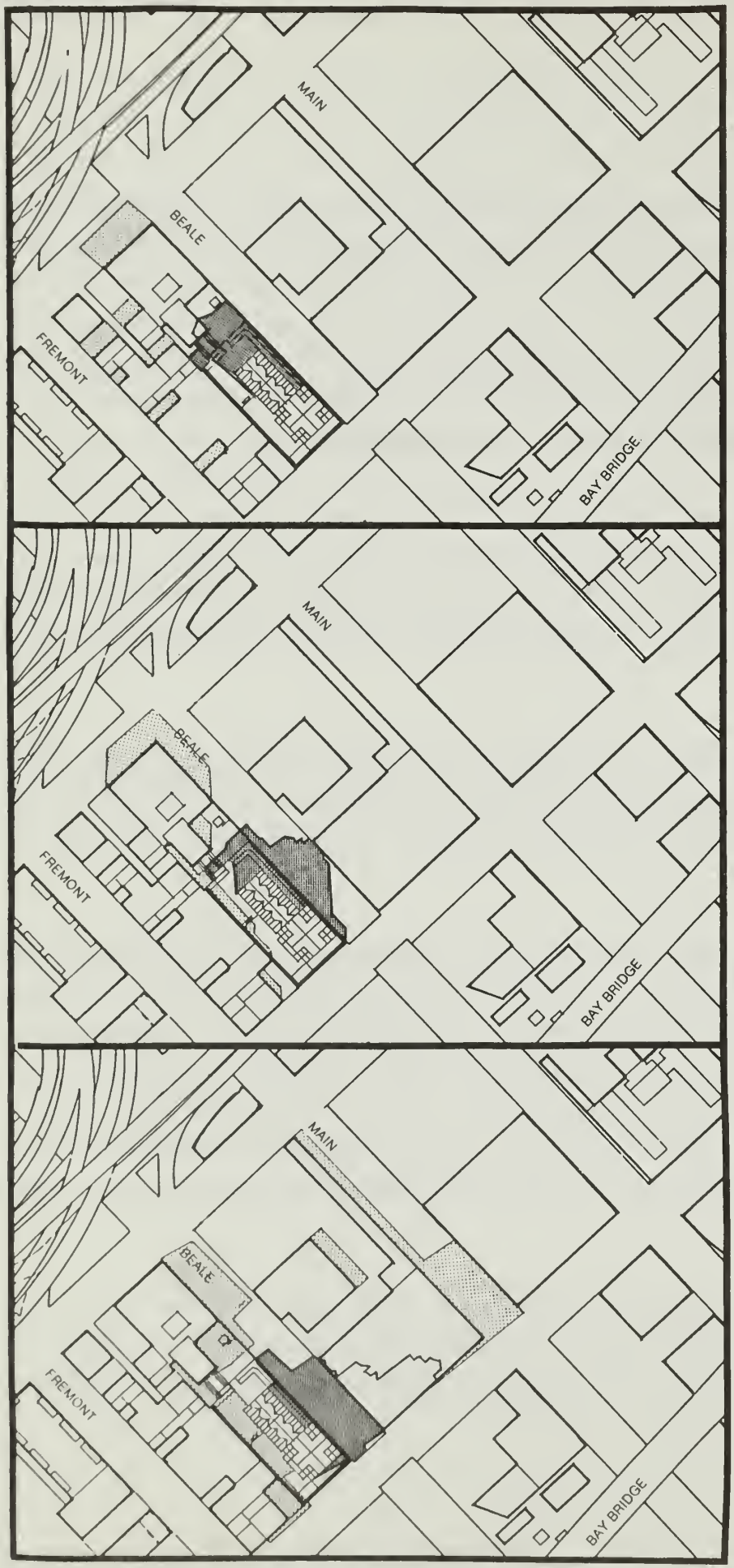
a. March 21 (PST). At 10:00 a.m. on March 21 (see Figure 20), the project would add shadows to about 60% of the proposed public plaza between Phase I and Phase II. About 45% of common usable open space on the terraced section of the project would also be shaded at this time.

At 12:00 noon on March 21 (see Figure 20), the proposed building would shade about 25% of the public plaza. Additionally about 25% of the plaza would be shaded by existing shadows. Shadows would be added to the eastern and northern portions of terraced open space on the project site. The eastern terrace would be entirely covered by project shadows. About 50% of the northern open space would be covered by project shadows. Existing shadows would cover about 20% of the terraced portion of the project on its west side. Shadows would also be added to the western sidewalk of Beale Street and the street itself opposite the site.

At 3:00 p.m. on March 21 (see Figure 20), the project would shade all of Beale Street east of the project site. The eastern portion of the project's terrace would also be shaded at this time. About 65% of the public plaza between Phase I and Phase II would be covered

SHADOW PATTERN ANALYSIS: MARCH 21

FIGURE 20



SOURCE: EIP ASSOCIATES

FEET 0 100 200 400

EXISTING SHADOW

SHADOW ADDED BY PROPOSED PROJECT

OUTLINE OF PROJECT SHADOW

10 AM

12 NOON

3 PM

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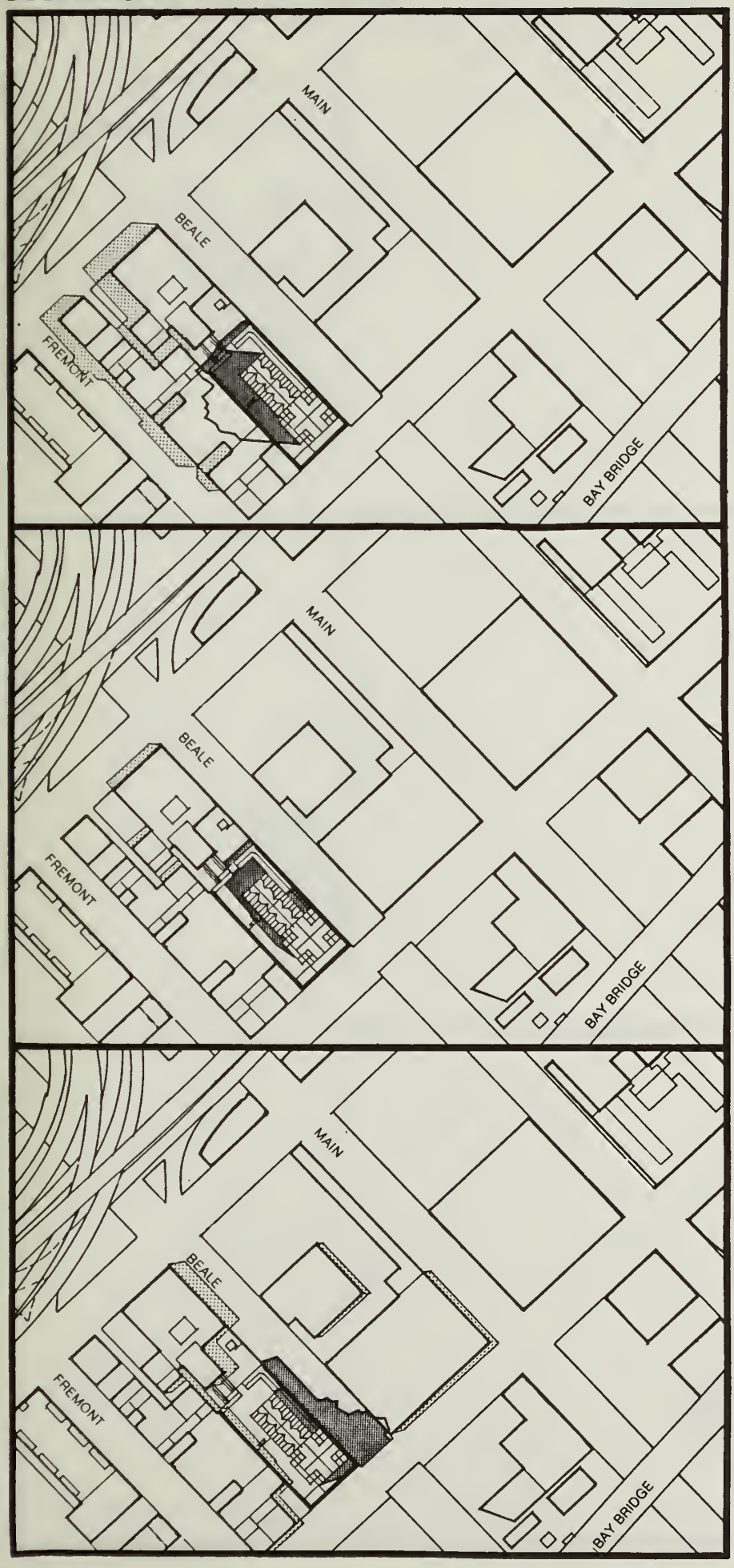
SHADOW PATTERN ANALYSIS: JUNE 21

FIGURE 21



SOURCE: EIP ASSOCIATES

FEET 0 100 200 400

EXISTING SHADOW

SHADOW ADDED BY PROPOSED PROJECT

OUTLINE OF PROJECT SHADOW

10 AM

12 NOON

3 PM

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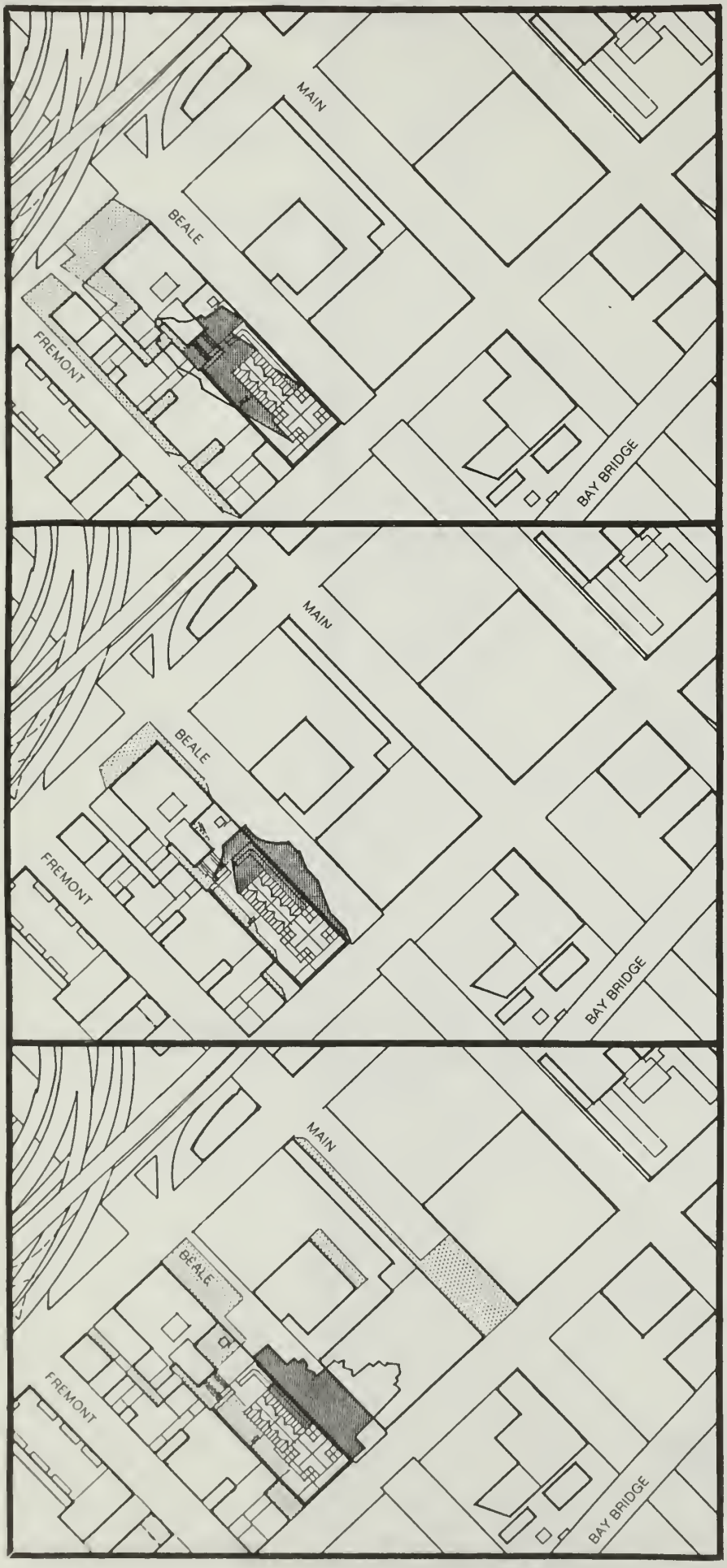
SHADOW PATTERN ANALYSIS: SEPTEMBER 21 FIGURE 22



SOURCE: EIP ASSOCIATES

FEET 0 100 200 400

EXISTING SHADOW

SHADOW ADDED BY PROPOSED PROJECT

OUTLINE OF PROJECT SHADOW

10 AM

12 NOON

3 PM

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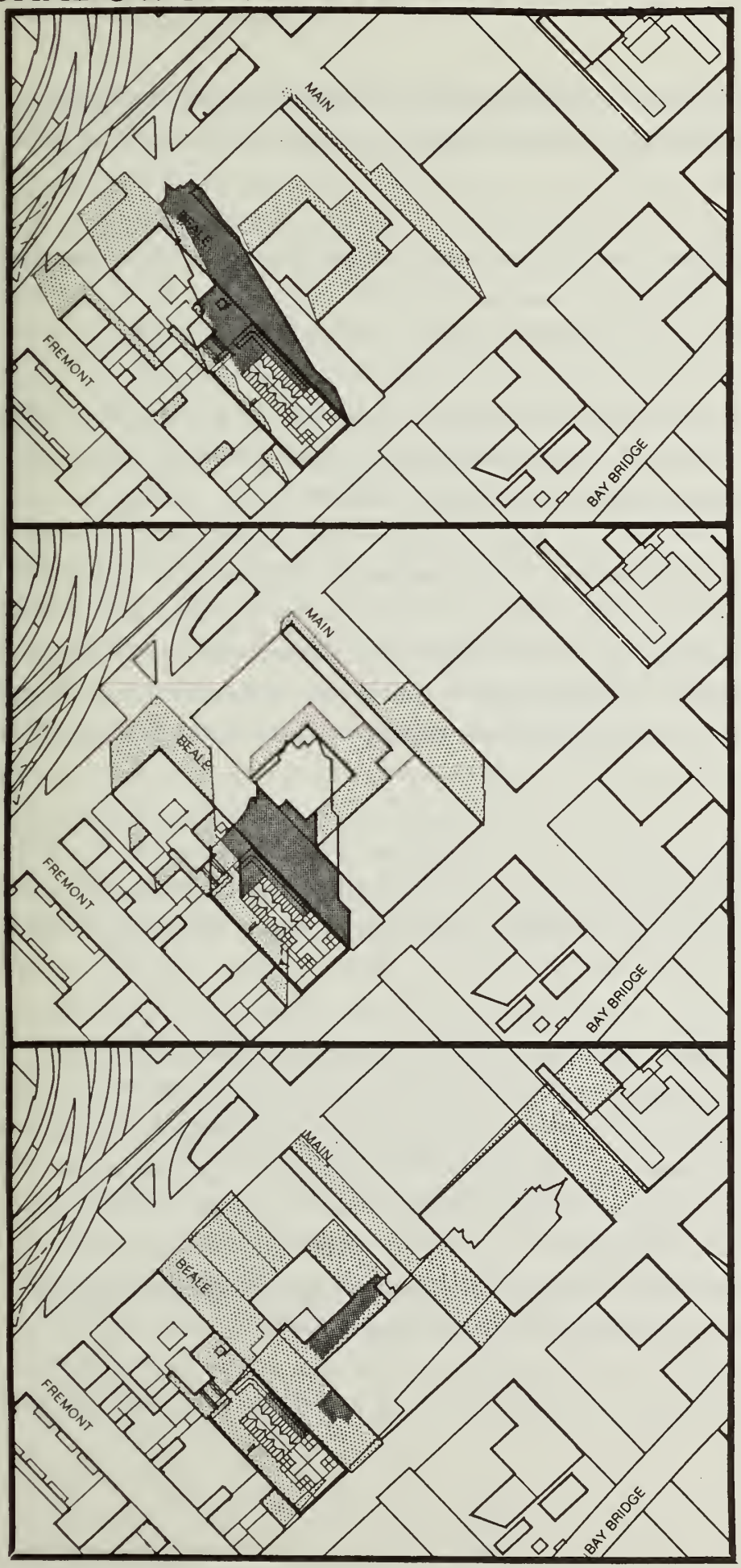
SHADOW PATTERN ANALYSIS: DECEMBER 21 FIGURE 23



SOURCE: EIP ASSOCIATES

FEET 0 100 200 400

EXISTING SHADOW

SHADOW ADDED BY PROPOSED PROJECT

OUTLINE OF PROJECT SHADOW

85003

by existing shadow. Additionally, about 60% of the west side of the common usable open space on the western terrace of the project would be shaded at this time by existing shadows.

b. June 21 (PDT). At 10:00 a.m. on June 21 (see Figure 21), the project would cast shadows on about 15% of the public plaza to the north. The project would also shade about 60% of the western portion of project common usable open space on-site.

At 12:00 noon on June 21 (see Figure 21), the proposed building would shade about 6% of the public plaza. New shadows would shade about 30% of the terraced area of project open space generally to the north and west of project buildings.

At 3:00 p.m. on June 21 (see Figure 21), the project would add shadows to Beale Street east of the project site. The eastern portion of the project terrace would also be shaded at this time as would a section of the southeast corner of the terrace. About 25% of the public plaza would be shaded by existing shadows. About 15% of the common usable open space of the terraced area would be covered by existing shadows on the west side of the site.

c. September 21 (PDT). At 10:00 a.m. on September 21 (see Figure 22), the project would cast a shadow on about 60% of the public plaza northwest of the Phase II site. New shadows would also be added to about 55% of the western and northern section of the terrace.

At 12:00 noon on September 21 (see Figure 22), the proposed building would shade about 25% of the public plaza. Additionally, about 25% of the plaza would be shaded by existing shadows. About 35% of the terraced portion of the project on the northern and eastern side would be covered by new shadows. The eastern terraced area would be entirely covered by shadow at this time. About 20% of the western side of common usable terrace area would be covered by existing shadows. A section of Beale Street east of the project site would be shaded by the new project. Shadows would also be added to the western sidewalk of Beale Street and extend about halfway into the street.

At 3:00 p.m. on September 21 (see Figure 22), the eastern terraced portion of the project would be entirely covered by new shadows. Existing shadows would cover about 70% of the public plaza between Phase I and Phase II. Additionally, about 45% of the terraced area of the project would be covered by existing shadow on its western side at this time. The project would cast shadows across Beale Street east of the project site.

d. December 21 (PST). At 10:00 a.m. on December 21 (see Figure 23), the proposed building would shade about 85% of the public plaza between Phase I and Phase II of the project. About 15% of the plaza would be covered by shadows from existing buildings. About 35% of the terraced area of the project would be covered by new shadows at this time. In addition, about 20% of the west side of this terraced area would be covered by existing shadows. The project would add shadows to Beale Street and its sidewalks along the project site. The top of the shadow would extend about halfway into Folsom Street.

At 12:00 noon on December 21 (see Figure 23), the proposed building would shade about 20% of the public plaza. About 65% of this public plaza would be covered by existing shadows at this time. About 50% of the common usable space on the terraced area of the project would be covered with existing shadows. New shadows would shade about 30% of the project terrace to the north and east of the building.

At 3:00 p.m. on December 21 (see Figure 23), the public plaza would be covered entirely by existing shadows. The east terrace of the project would be entirely covered by new shadows. Existing shadows would cover entirely the western and northern areas of common usable open space on the terraces of the project. Practically all of Beale Street east of the site would be shaded by existing shadows, as well as part of the existing property on the east side of the street. New project shadows would add to existing shadows on this property. New shadows would reach Main Street, one block east of the site. However, this area of Main Street would be covered by existing shadows at this location. Project shadows would not reach as far as Spear Street at this time.

e. Shadow on Existing and Potential Open Space. In June, 1984, the voters of the City and County of San Francisco approved Proposition K, the Park Shadow Ban initiative ordinance prohibiting the issuance of building permits for structures that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and

Park Commission unless the City Planning Commission determines that such shade would have an insignificant adverse impact on the use of such property.

In the project vicinity, as shown in Figure 24, page 79, there is no existing property under the jurisdiction of the Recreation and Park Department that would be affected by project shadows. Figure 24 considers the project shadow outline of the residential tower (the tallest proposed structure on the site), from one hour after sunrise to one hour before sunset year round, and does not consider existing shadows or shadows from intervening structures, both of which would reduce the length of project shadow outline shown. Currently, however, intervening buildings and uneven topography produce shadow patterns as shown in Figures 20-23. Figure 24 shows the proposed Rincon Point Park, a part of the Rincon Point-South Beach Redevelopment Plan which is a San Francisco Redevelopment Agency project. There is no specific design for this potential park site; only the general boundaries have been defined. The proposed project would not affect the area under consideration.

2. Wind[1]

Prevailing winds in San Francisco are from the northwest, west-northwest, west and west-southwest. Wind tunnel measurements were made at 24 surface locations near or within the project site for each of the prevailing wind directions using a scale model of the site, the project and vicinity. The study included separate tests of northwest, west-northwest, west and west-southwest winds under existing conditions, and future conditions with the project in place.

Wind test data were combined with wind records to predict the wind speeds that would be exceeded 10% of the time at each test location. The predicted winds were then compared to the comfort and hazard criteria in the Planning Code, established in the Section 249.1. (See Appendix B, p. A-32 for a summary of the full wind analysis.) Throughout the following discussion, the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time.[2]

Existing wind speeds are 4-8 mph at the sidewalk locations tested. (See Appendix B, Figure 1, p. A-35, for a figure showing the locations of, and wind speeds at, the test points.) Existing winds at all of these locations meet the 11 mph comfort criterion. As

PROPOSITION K SHADOW ANALYSIS

FIGURE 24

SOURCE: EIP ASSOCIATES

Shadow outline cast on flat plane to illustrate the theoretical extent of project shadows one hour after sunrise and one hour before sunset year round

85003

noted in Chapter III.C.2., page 34, winds up to 4 mph have no noticeable effect on pedestrian comfort, while winds from 4 to 8 mph can be felt on the face. Winds from 8 to 13 mph will disturb hair and cause clothing to flap.

The proposed project would provide open space subject to wind criteria of 7 mph for public seating areas and 11 mph for areas of substantial pedestrian use. Seating areas in the project would be located on common recreation terraces, which would be available to residents, and the publicly-accessible plaza and overlook. Areas of substantial pedestrian use include the plaza area in front of the building on Harrison Street, the public plaza on Beale Street and the walkway joining the two areas. (For a diagram showing exact locations see Appendix Figure 1, page A-35.) The 11 mph pedestrian comfort criteria would be met at all locations tested. At the ten measurement locations within sitting areas created by the project, winds would be below the 7 mph criterion at four locations, would equal the criterion at four locations, and would exceed it at two locations. The maximum windspeed at the two sitting areas in excess of the criterion would be 8 mph.

Section 249.1(3)(A) of the Code states that when a proposed building causes windspeeds to exceed the comfort level, the building must be designed to reduce the windspeeds to meet the requirement. The model tested did not include landscaping and vegetation, two factors that affect wind locally. Within the public seating areas wind can be brought down below the sitting area criterion of 7 mph with appropriate wind-sheltering landscaping such as trees, shrubs, fences or screens.[1] The proposed project would include such landscaping on the plaza areas and along walkways and sidewalks.

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[1] This section is based on a study entitled "Wind Tunnel Analysis for the Proposed 300 Beale Street Project," May 1986, prepared by EIP Associates. A summary of the report is included in Appendix B, p. A-32; the complete report is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, Sixth Floor.

[2] Equivalent windspeed is an hourly wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians.

D. TRANSPORTATION

The analysis below includes a brief summary (summaries) of the materials in the Rincon Hill Plan EIR. This summarized material is incorporated by reference as follows:

RINCON HILL PLAN, FINAL EIR TEXT

I. SUMMARY. Travel Demand, Traffic, Parking, Public Transportation, Cumulative Development Impacts (pp. 4-5).

III. TRANSPORTATION SETTING. Traffic, Local and Regional Street Network, Circulation, Parking, Public Transportation, Pedestrian Circulation (pp. 56-58).

IV. TRANSPORTATION IMPACTS. Travel Demand, Traffic Impacts, Transit Impacts, Parking Impacts, Pedestrian Impacts (pp. 101-116).

V. MITIGATION MEASURES. Pedestrian Trips, Transit, Trip-Making Surveys, Circulation, Parking, Construction Impacts (pp. 136-139).

RINCON HILL PLAN, SUMMARY OF RESPONSES TO COMMENTS

Transportation (pp. 41-54).

Full buildout of the proposed Rincon Hill Plan could generate approximately 110,200 net new daily person trips (11,400 p.m. peak-hour person trips). Service levels at critical intersections leading to the regional freeway system would continue to operate at a level of service "F" during the peak periods. Other streets/intersections would operate at levels of service "D" or better.

At full buildout, there could be a demand for approximately 5,700 long-term and 400 short-term commercial parking spaces and 1,900 to 3,500 residential parking spaces.

Full buildout could create approximately 2,000 additional p.m. peak-hour Muni trips, which would contribute to cumulative impacts creating loadings at levels of service "D" and "E".

The Rincon Hill Plan EIR (Final EIR, 82.39E, certified July 18, 1985) is available for review at the Department of City Planning, the San Francisco Main Library, and various branch libraries. The Rincon Hill Plan EIR analyzes the combined transportation impacts generated by full Rincon Hill Plan build-out and cumulative transportation impacts at

year 2000 evaluated in the Downtown Plan EIR (EE 81.3, certified October 18, 1984). The methodology and cumulative impact analysis provided in the Downtown Plan EIR are summarized below and incorporated by reference, as was also done in the Rincon Hill Plan EIR.

DOWNTOWN PLAN, VOLUME 1: FINAL EIR TEXT

I. SUMMARY. E. Transportation and Circulation; Travel Demand, Public Transportation, Traffic, Parking, Pedestrian Circulation, Mitigation (pp. I.E.1-I.E.6).

IV. ENVIRONMENTAL SETTING AND IMPACTS OF THE DOWNTOWN PLAN. E. Transportation and Circulation; Introduction (pp. IV.E.1-IV.E.3); Setting (pp. IV.E-3-IV.E.20): Travel Demand Analysis, Transit, Traffic, Parking, Pedestrian Circulation; Impacts (pp. IV.E.20-IV.E.47): Travel Demand Analysis - 1990 Impacts, 2000 Impacts; Parking - 1990 Impacts, 2000 Impacts; Pedestrian Circulation - 1990 Impacts, 2000 Impacts.

V. MITIGATION OF ENVIRONMENTAL IMPACTS (pp. V.E.1-V.E.30). E. Transportation and Circulation: Annual Growth Limits, Measures Proposed as Part of the Downtown Plan.

VI. ALTERNATIVES (pp. VII.E.1-VII.E.4). E. Transportation and Circulation: Travel Demand, Public Transportation, Traffic, Parking, Pedestrian Circulation.

VOLUME 2: APPENDICES (pp. J.1-J.38). J. Transportation and Circulation Analyses and Methodologies: Introduction, C-3 District Employer/Employee Survey Travel Demand Analysis, Future Transit Capacities, Services Vehicles, Pedestrian Circulation.

VOLUME 3: SUMMARY OF COMMENTS AND RESPONSES (pp. C&R 1-Z.4). Part 1: Responses.

The travel data presented in the Downtown Plan EIR transportation sections are projections of total demand on the transportation system serving San Francisco. The projections comprise three components of travel demand. Two of the components were developed through an intricate travel modelling process for the C-3 District of San Francisco. These first two components of travel demand are C-3 District work (employee journey to and from work) travel and C-3 District non-work (all other) travel. The third component is non-C-3 District travel, which was forecast through an analysis of regional trends adjusted for the effect of development in the C-3 District. Non-C-3 District travel is defined as travel that has neither an origin nor a destination in the C-3 District. Thus, non-C-3 travel includes travel to and from other parts of downtown and trips through San Francisco from other parts of the region. Employment forecasts are not specifically used in the non-C-3 travel analysis.

Because the Downtown Plan EIR transportation analysis has included forecasts for travel demand from outside the C-3 District, the projections of total future demand at the regional screenlines include the demand from the 300 Beale project (in a non-specific manner). Thus the downtown Plan EIR transportation projections and method of analysis are relevant and applicable to the analysis of the transportation impacts of the 300 Beale project in the cumulative context.

The phrase "non-specific manner" refers to the method used to forecast non-C-3 travel. As discussed above, the transportation analysis in the Downtown Plan EIR consisted of (i) projected travel demand from the C-3 District and (ii) forecast estimates of non-C-3 travel. The non-C-3 travel forecasts are "non-specific" because the method of calculation was to apply growth trends (developed from observed data at regional screenlines) to estimates of non-C-3 travel at each screenline. Non-C-3 growth for the regional freeway analysis was expressed as an increase in the numbers of automobiles on the freeways, while non-C-3 growth for the transit analysis was expressed as an increase in riders. Because there is no method for expressing the non-C-3 growth at the screenlines in relation to the total travel from the non-C-3 area (both inside and outside San Francisco), the non-C-3 growth is termed "non-specific."

The Downtown Plan EIR (Final EIR, EE81.3, certified October 18, 1984) is available for review at the Department of City Planning, the San Francisco Main Public Library, and various branch libraries.

SITE SPECIFIC ANALYSIS

1. Project Travel Demand

On the basis of land use trip generation factors, the project would generate about 4,155 new person trip-ends (pte) per day.[1,2] (Table 4, page 84, calculations for project trip generation.) The trip generation calculations include travel to and from the project site by employees, visitors, and residents of the project. Additionally, although expressed on a person trip-end basis, the trip generation includes all travel to and from the project in autos, service vehicles and trucks, on public transit and other modes (i.e. walking, bicycles, taxis, etc.). Projected outbound (peak commute direction) p.m. peak-period and peak-hour trips expected to be generated by the project are shown by mode in Table 4.

TABLE 4

NET NEW PROJECT PERSON TRIP GENERATION

Land Use	Daily Trip Rate	Daily Trips	Peak Period Trips (1 hr/2hr)	
			Total	Outbound
128,536 gross sq ft office area	18.1/1,000[1,2]	2,327	240/384	228/365
2,200 gross sq ft retail area	150/1,000[2,3]	330	33/54	17/28
200 units residential	7.5/unit	1,500	158/285	48/87
	TOTALS	4,157	430/723	293/480

2,327	daily office trips	=	931 work trips[4]	+	1,396	non-work trips
330	daily retail trips	=	13 work trips[4]	+	317	non-work trips
1,500	daily residential trips		525 work trips[5]		975	non-work trips
	TOTALS		1,469 work trips		2,688	non-work trips

[1]San Francisco Department of City Planning, Guidelines for Environmental Review, September 1983.

[2]Caltrans, Eleventh Progress Report on Trip Ends Generation, pages 167, 168, 171 and 174, July 1976.

[3]Institute of Transportation Engineers, Trip Generation, 1979, not paginated.

[4]Based on the Downtown Plan EIR.

[5]**Rincon Hill Plan, FEIR, Certified July 18, 1985.**

About 480 new outbound trips from the project would occur in the p.m. peak-period, of which about 295 would occur in the p.m. peak-hour.

Modal assignments have been made on the basis of modal splits for the years 1984 and 2000 as contained in the EIR for the Downtown Plan (EE81.3).[3] Although the proposed project was not completed in 1984, the 1984 modal split has been used for the purpose of identifying impacts at the single project level. The future modal splits have been applied to the project travel for the purpose of comparing project travel with future travel demand on the transportation system serving San Francisco.

The modal splits used were derived from aggregate data for the C-3 District, and thus represent the average condition. The 300 Beale site is outside the C-3 District, however travel behavior at the Beale site has been assumed to be similar to travel in the C-3 District because of the close proximity of the site to the boundaries of the C-3 District, and because the office uses for the proposed project are similar to C-3 District land uses. Table 5, page 86, shows the modal distribution for the project for both 1984 and the year 2000.

2. Rincon Hill Plan Transportation Policies

The project would relate to several objectives and policies of the Rincon Hill Plan, a part of the San Francisco Master Plan.[4] The project would respond to objectives of the Plan, insofar as they relate specifically to the project. One objective of the Plan calls for creation of a "safe and pleasant pedestrian network(s)". The proposed project would provide public access from Harrison Street leading down to the pedestrian plaza on Beale Street. The pedestrian plaza could eventually become part of the system designed to provide a pedestrian route from the top of the Hill to the Embarcadero Promenade on the waterfront. Another objective of the Plan calls for sufficient off-street parking space for residents. The Phase II structure would provide 200 spaces for 200 units, as required by Code.

3. Transit

The location of the project site on Beale Street at Harrison, close to the Transbay Terminal, provides access to 13 Muni routes within two blocks of the project. Muni Metro

TABLE 5

DISTRIBUTION OF NET NEW PROJECT PERSON TRIPS
OUTBOUND DURING PM PEAK-PERIOD

Location and Mode	Peak Hour (4:30-5:30)[1] 1984	Peak Hour (4:30-5:30)[1] 2000	PeakPeriod(4:00-6:00)[1] 1984	PeakPeriod(4:00-6:00)[1] 2000
San Francisco				
Drive Alone	35	33	55	53
Carpool	13	13	22	22
Vanpool	--	--	1	1
Muni NE	16	17	33	33
Muni NW	24	25	40	41
Muni SW	21	21	40	41
Muni SE	6	6	11	12
BART	7	8	14	14
Walk	56	56	98	98
Other	3	3	6	6
Total	181	181	321	321
East Bay				
Drive Alone	3	2	4	4
Carpool	11	11	14	12
Vanpool	4	4	4	4
BART	27	32	41	48
AC	14	11	22	18
Other	1	1	1	1
Total	59	59	86	86
Peninsula				
Drive Alone	5	4	8	7
Carpool	11	11	15	15
Vanpool	--	--	--	--
MUNI	--	--	2	2
BART	7	7	8	8
Samtrans	3	4	5	6
Caltrain	5	6	8	8
Other	--	--	--	--
Total	32	32	47	47
North Bay				
Drive Alone	4	3	5	4
Carpool	3	3	4	4
Vanpool	--	--	1	1
GGT Bus	9	10	14	14
GGT Ferry	2	2	2	3
Other	1	1	1	1
Total	20	20	27	27
TOTAL	293	293	480	480

Source: Department of City Planning, Office of Environmental Review (OER), EIR for the Downtown Plan, EE81.3, certified October 18, 1984, on file at OER.

[1] Numbers may not total due to rounding.

and BART service in the Market Street subway are accessible via the Embarcadero station. AC Transit, Golden Gate Transit and SamTrans also provide service from the Transbay Terminal (Figure 14, page 44). Photographic examples of p.m. peak-hour loadings on Muni vehicles are shown in Appendix C, page A-37 - A-39.

Muni operations in the four corridors of San Francisco are currently at Level of Service D and E; and BART is shown to be operating currently at Level of Service F Eastbay and in Level of Service D in the Westbay. Table C-1, Appendix C, page A-36, contains descriptions of the various Levels of Service for bus transit. In the p.m. peak-hour, the project would generate about 65 new Muni trips and about 40 new BART trips outbound from the project site. Addition of the project p.m. peak-hour Muni riders to the existing (1984) Muni ridership would not increase loading ratios in any of the Muni corridors.

Addition of the project's BART riders to the existing BART ridership would not increase the p.m. peak-hour Eastbay loading ratio (Level of Service would remain F) or the Westbay Bay loading ratio.

The project would contribute to increases in transit ridership in the major transit corridors leading from downtown San Francisco. Existing peak-period and peak-hour transit ridership would be increased by 0.1% to 0.2%, with the greatest increases from the project riders occurring in the Muni northwest corridor. Ridership increases of this magnitude would fall within the day-to-day fluctuations in transit ridership. However, the project would contribute to cumulative passenger loadings on Muni, BART and other regional transit carriers generated by cumulative development in the greater downtown.

Cumulative development under the Downtown Plan to the year 2000 in conjunction with planned capacity increases of transit carriers would be expected to cause the following changes in transit Levels of Service during the peak period: Muni Northwest Corridor, E to D; BART Transbay, F to E; AC Transit, C to D; Golden Gate Ferry, B to A; Tiburon Ferry, A to B; and Caltrain, B to C.

Muni. The estimated 1981-82 (most recent available) net marginal cost (or increase in the deficit for Muni operations) per additional ride is $0.50.[5] This deficit-per-figure, because it is a marginal cost, is appropriate for small increases in Muni ridership (such as those

requiring one or a few additional vehicle trips). Assessments of costs that would result from cumulative development require the inclusion of additional cost factors and may be best projected using average costs.[6] It is reasonable to conclude that average costs would be significantly higher than marginal costs.

The project would generate about 64,010 peak-period peak-direction rides per year in the year 2000, which would generate a cost deficit to Muni of about $32,005, assuming that the cost-per-ride deficit remains the same.[7] (This conclusion should be qualified because the Muni deficit-per-passenger-trip figure is based on 1981-82 data, and because the total project-generated deficit is calculated only for those riders who use Muni as their primary mode of transportation, excluding riders who would use a combination of transportation carriers, such as Muni and Caltrain. More recent data that would allow a more precise estimate of costs are not available.) The project would offset this deficit through its contributions to the General Fund, the Transit Impact Development Fee and sales tax revenues.

On April 27, 1981, the San Francisco Board of Supervisors approved Ordinance 224-81, establishing the Transit Impact Development Fee (TIDF) to support the additional operating costs and capital improvements for Muni transit services associated with new downtown commercial development. The ordinance established a one-time fee of up to $5.00 per gross sq. ft. upon occupancy of new office space within the greater downtown area; the 300 Beale project is located within the fee assessment area. The TIDF ordinance has been in litigation almost since its inception. On January 4, 1985, the San Francisco Superior Court issued a final decision upholding the ordinance. On March 12, 1985, the plaintiffs, a group of downtown property owners, appealed the decision. Money has been collected pursuant to the ordinance, and is being deposited in an escrow account, pending resolution of the litigation. Under the ordinance the project would generate about $642,680 in one-time fee revenues to Muni. The fee is intended to recover additional transit costs for the entire economic life of a building, and thus cannot be compared directly to the annual Muni deficit discussed above. The fees collected under the ordinance would, however, reduce the amount of General Fund revenue support necessary for existing and future Muni operations.

The project would also offset Muni's annual operating deficit attributable to the project through its contributions to the General Fund revenues, which would be derived from a variety of taxes leveled on the proposed project. In the past, a portion of General Fund revenues has been allocated to Muni. The historical level of contribution of General Fund revenues to Muni could change, however, if the TIDF is upheld. Because of the variable relationships of the sources from which Muni receives operating funds, the annual General Fund contribution from the project to Muni cannot be quantified.

General Objective 1, Policy 6 of the Transportation Element states as a goal to "develop a financing system for transportation in which funds may be allocated without unnecessary restriction for priority improvements according to established policies." (p. 10) The project sponsor has agreed to participate in legally adopted funding measures for downtown transit, proportional to demand created by the project.

BART. For the fiscal year ending June 30, 1985, the average net operating deficit per passenger trip for BART was about $1.20.[8] On the basis of about 105,840 rides per year in the year 2000, the estimated annual BART deficit attributable to the project would be about $127,000, assuming that the cost per ride is the same.[9] The project would generate a total of about $18,915 in revenues to BART, including about $13,500 in property tax revenues, and about $5,335 from the 75% of the 0.5% transit sales tax allocated to BART. This amount does not include the remaining 25% of the 0.5% BART sales tax revenue distributed by MTC among BART, Muni and AC Transit. After subtraction of BART's revenues from sales and property taxes that would be generated by the project, the net operating deficit would be about $108,085. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future.

4. Traffic

a. Local Traffic Analysis. The local street network surrounding the project is shown on Figure 12, page 43. Local traffic impacts for the p.m. peak-hour have been assessed for the intersections of Folsom/Beale (adjacent to the project site), Harrison/Fremont and Bryant/Beale. Folsom/Beale and Harrison/Fremont are currently operating at Level of Service "B", while Bryant/Beale is operating at Level of Service "C" (see Table 6, page 90). The worst traffic conditions among the intersections analyzed exist at Harrison/First

TABLE 6

EXISTING AND PROJECTED INTERSECTION PERFORMANCE

Intersection	Existing	Existing + Project	Year 1990	Year 2000
Folsom/Beale	.63 B	.63 B	0.70 C	0.77 C
Bryant/Beale	.70 C	.70 C	0.76 C	0.83 D
Harrison/Fremont	.63 B	.63 B	0.70 B	0.77 C
Harrison/First	.99 E	.99 E	1.01 F	1.12 F
Harrison/Fourth[1]	- E/F	- E/F	- F	- F

Counts conducted by EIP Associates and DKS Associates, April 1985.

[1]Count conducted by EIP Associates, February 4, 1986.

which currently operates at Level of Service "E" at capacity. This is the result of peak-period traffic congestion eastbound on the Bay Bridge which backs up onto City streets for 1 to 2 hours. Vehicles at this intersection experience long delays and queues that extend to the intersection of Folsom/First.

The access point for the project would be from Beale Street. Because Beale Street is one way southbound and Beale and Harrison Streets are grade separated, vehicles leaving the site would travel south on Beale, turn east on Bryant and then north on Main to reach Harrison Street.

Outbound commuters leaving the project site in vehicles would most likely travel up Harrison Street to the Bay Bridge on-ramp at Harrison and First, take Harrison to Fremont to enter the Central Business District, or take Harrison to the Fourth Street on-ramp for travel to the Peninsula. North Bay-bound vehicles could take Folsom to The Embarcadero and then reach the Golden Gate Bridge via Bay Street. Bay Bridge bound carpool vehicles can directly access the Bridge carpool entrance at Second and Bryant via the carpool lane by traveling westbound from Beale Street along Bryant Street.

The proposed project would generate 95 p.m. peak-period vehicle trips and 60 p.m. peak-hour vehicle trips.[10] The p.m. peak-hour traffic generated by the project would be about the same as the traffic generated by the existing parking lots (60 p.m. peak-hour vehicles).[11] The proposed project would not generate an increase in peak-hour traffic over the existing use. The surrounding intersections would not experience any significant change in traffic conditions or Level of Service due to the project traffic. Because parking in the area is saturated (greater than 90% occupancy), vehicles using the existing parking lot would have to go beyond the immediate area to find parking and would probably not be using the local intersections.

The localized effects of cumulative development on street and intersections immediately adjacent to the project site were prepared using underlying traffic growth factors representing "worst case" scenario. It is estimated that in the City's south of Market area west of Sixth Street, traffic volumes will grow 8% by the year 1990 and 19% by the year 2000.[12] These growth factors include traffic generated by the proposed project plus traffic generated by cumulative development in the surrounding areas.

Table 6, page 90, shows the Levels of Service (LOS) and volume-to-capacity ratios at the intersections analyzed in the site vicinity as they currently exist, existing plus project, as estimated in 1990 and in the year 2000 (including the project). Traffic generated by the proposed project would not change existing levels of service at any of the intersections analyzed. By the year 1990, of the three local intersections (non-freeway entrances), the Folsom/Beale intersection is projected to degrade from B to C, while Bryant/Beale and Harrison/Fremont would remain at C and B, respectively. Intersection levels of service degrade at all intersections by the year 2000. Project traffic is included as part of the cumulative traffic, but would not individually affect levels of service in the year 1990 or 2000.

b. Freeway On-Ramp Analysis. Traffic operations at the two intersections serving freeway on-ramps near the project site (First/Harrison and Fourth/Harrison) are shown in Table 6. During the peak-hour, the intersection of Fourth and Harrison operates at Level of Service "A/B" but is frequently affected by freeway congestion on the James Lick Freeway which sometimes backs onto surface streets during the p.m. peak-hour. During these periods the intersection has operating characteristics similar to "E/F" conditions.

First and Harrison currently operates at Level of Service "E". This results in traffic congestion on First and Harrison Streets extending several blocks in the peak-hour. Vehicles at this intersection experience long delays and queues that extend as far back as Folsom. Operations at Levels of Service E and F represent unacceptable delay to motorists and queues of vehicles are present during the p.m. peak-hour on the approaches to the freeway on-ramps. Vehicles from the project would incrementally contribute to traffic at freeway on-ramps during the p.m. peak hour.

Project traffic alone would not change the LOS at any freeway on-ramps. Level of Service descriptions are shown in Table C-3, Appendix C, page A-44. For the year 2000 projections, 1984 traffic volumes were increased by a 19% average growth factor based on the Downtown Plan EIR traffic analysis. The growth factor represents a worst-case, unrestrained auto demand condition for street traffic in the downtown and, as such, is probably higher than actual traffic growth may be in the future in the downtown. Motorists confronted with increased delays on surface streets would be expected to alter their travel patterns to use less congested routes (to the freeway ramps) or to travel at different times (to avoid periods of traffic congestion). The intersections of First/Harrison and Fourth/Harrison are at Level of Service E and E/F respectively, during the p.m. peak hour. Peak-hour conditions would be expected to deteriorate at both of the intersections by the year 2000 as shown in Table 6. Expanded areas of traffic congestion would disrupt surface Muni operations.

Muni operations would be adversely affected by increased congestion. Operation of Muni surface transit routes through the congested areas would be impeded; this would lead to decreased levels of Muni service since scheduled headways would not be met.

Freeway Corridor Analysis

The project would contribute to increases in traffic on the major freeways serving downtown San Francisco. Both the East Bay and Peninsula corridors would have excess peak-hour demand that would not be met during the peak period. The North Bay corridor would have excess demand in the peak period. Excess auto demand would result in either a spreading of the demand into the hours adjacent to the peak period or in increased transit and ridesharing use should additional transit service (beyond that assumed to occur by the year 2000) or ridesharing incentives be provided.

Traffic generated by the project would increase total traffic on major freeways during the p.m. peak period by less than 0.1% and the p.m. peak hour by about 0.1%. Such increases would not be measurable against the day-to-day fluctuations in traffic volumes. Because the Bay Bridge p.m. peak-hour eastbound traffic flow is functionally at capacity, the travel demand from the project would not be expected to increase the flows on the Bay Bridge in the peak hour; rather the East-Bay-bound auto traffic from the project would most likely compete with and possibly displace existing users of the Bay Bridge into later portions of the peak period. This competition for access would occur at the on-ramps to the Bay Bridge and any displacement of existing users to later time periods would depend on the time of arrival of project vehicles at the on-ramps. Some drivers would shift to carpools or transit as a result of cumulative displacement.

5. Parking

The project's parking demand has been calculated on the basis of trip generation, vehicle occupancy, modal split data, and residential auto ownership.[2,3,13] Based upon the project's travel patterns, parking demand would be calculated as follows:

Phase I - Office Uses

931 daily work trips (office) x 22% auto/1.6 persons per auto/2 one-way trips per auto = 64 long-term parking spaces.

1,396 daily non-work trips (office) x 10% auto/1.3 persons per auto/2 one-way trips per auto/5.5 turnovers daily = 10 short-term parking spaces.

Phase I Demand = 74 spaces

During rehabilitation of Phase I, 119 parking spaces would be maintained on the project site. Construction staging for the nine months of rehabilitation would be located off-street in the area of the site planned for open space.

Phase II - Residential and Retail Use

13 daily work trips (retail) x 22% auto/1.6 persons per auto/2 one-way trips per auto = 1 long-term parking space.

317 daily non-work trips (retail) x 10% auto/1.3 persons per auto/2 one-way trips per auto/5.5 turnovers daily = 2 short-term parking spaces.

200 residential units x .60-.76 spaces per unit[13] = 120-152 spaces

Phase II demand = 123-155 spaces.

During construction of Phase II, no parking will be available on-site. Removal of the 119 spaces would result in increased competition for parking in the surrounding area.

Total project demand = 197-229 spaces.

Completion of Phase II would provide 331 spaces in a parking garage. Of the 331 spaces, 200 would be reserved for residential use and 131 for commercial use.

The project would eventually displace 121 existing commercial parking spaces on the project site. The anticipated project demand for office use (74 spaces) plus the displaced existing spaces (2 spaces displaced in Phase I) would create a parking surplus of 43 parking spaces following Phase I. Construction of 331 parking spaces in Phase II would replace the 119 Phase I spaces. Following Phase II, there would be a 67 space parking deficit for commercial use. (131 designated commercial spaces - 121 existing commercial spaces -77 space office and retail demand.) Residential construction in Phase II would provide 200 residential spaces, or 48-80-space surplus. However, these spaces would be reserved for residential use and would not be available for commercial parking.

City Planning Code (Section 249.1(c)(5)(A) and Section 249.1(d)(2)) would require 320 parking spaces calculated as follows:

118,800 occupied sq.ft. office at 1 space per 1000 occupied sq. ft. = 118.8 spaces
2,200 occupied sq. ft. retail space at 1 space per 1,500 occupied sq. ft. = 1.5
200 residential units @ 1 space per unit = 200 spaces.
Total 320.3 spaces

The project would require 320 parking spaces and 331 spaces would be provided.

6. Freight Loading

The project's freight loading needs have been calculated according to the City Planning Code.[14] The project's freight loading requirement would be:

307,186 gsf office and residential space = 2 spaces
2,200 gsf retail space = 0 spaces

Two loading docks would be required. Three loading docks are provided. One off-street loading area would be located adjacent to the pedestrian plaza to serve the Phase I building. Two loading docks would be located on the ground level of the Phase II structure, accessible from Beale Street.

The proposed project could generate about 40 service vehicle stops per day, and the three loading areas provided would be able to accommodate up to 65 deliveries per day.[15]

7. Pedestrian Flows

Pedestrian flows are light along the project's street frontage, even in the a.m. and p.m. peak-hour when commuters are walking to the parking lots located onsite and further south. Mid-day pedestrian activity is almost nonexistent.

The project would generate about 500 noon peak-hour and 335 p.m. peak-hour pedestrian trips.[16] Most of these trips would be to or from the project's entrances on Beale Street. Pedestrian flow regimes, currently open, would not degrade as a result of the project (see Table C-2, Pedestrian Flow Regimen, page A-40).

The proposed project provides a pedestrian plaza at the center of the site which would eventually function as part of the east-west mid-block pedestrian street outlined in the Rincon Hill Plan. This pedestrian street/open space is proposed to extend from The Embarcadero promenade to the top of the hill. The project sponsors would provide a plaza and a stairway that would ultimately link the upper Fremont Street section with lower Beale Street as suggested in the Plan. Assuming surrounding blocks are developed according to the Plan, pedestrian activities through the Beale site will increase as residential pedestrian activity on surrounding blocks increases.

8. Construction Activity

During the construction period, transportation impacts would result from truck movements to and from the site during construction activity. Phase I involves little new

construction and the rehabilitation of the existing building would take about nine months. The following discussion pertains to Phase II which would have a construction period of about 24 months. During this time transportation impacts would result from truck movements to and from the site during ground-clearing, excavation and building erection activity. Ground-clearing would require about four weeks and excavation require about eight weeks; these activities would generate an average of ten truck movements per day in and out of the project site. Construction truck access to the site would be from Howard and Beale Streets. Trucks would probably use Beale Street to Bryant to Main to Harrison and the Fourth Street/Harrison on-ramp of the Embarcadero Freeway to haul debris and excavated materials to a disposal site in South San Francisco. Construction activities (foundation work, steel erection and finishing) would also generate an average of ten truck movements per day during a 15-month period. The impact of construction truck traffic would be slight lessening of the capacities of access streets because of the slower movements and larger turning radii of trucks. Any truck traffic from 7:00 a.m. to 9:00 a.m. or from 4:00 p.m. to 6:00 p.m. would coincide with peak-hour traffic, particularly at freeway access points. The project sponsor has agreed to a mitigation measure to designate a construction vehicle coordinator to facilitate truck activity between 7:00-9:00 a.m. and 4:00-6:00 p.m. in order to minimize any potential for conflicts on the street along the project frontage during those hours. Muni runs two express bus lines along the project block on Beale Street during the peak-period, but there are no stops along the project frontage.

During the Phase II construction period, the sidewalks fronting the project site on Beale and Harrison Streets would be affected, and would probably be closed. Lane and sidewalk closures are subject to review and approval by the Department of Public Works. For Phase II, construction staging would be on-street.

Temporary parking demand from construction workers' vehicles, and impacts on local intersections from construction worker traffic, would occur in proportion to the number of construction workers who use automobiles.

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[1] San Francisco Department of City Planning, Guidelines for Environmental Review: Transportation Impacts, September 1983.

[2]Caltrans, Tenth Progress Report on Trip Ends Generation, July 1975.

[3]San Francisco Department of City Planning, Office of Environmental Review, Final Environmental Impact Report for the Downtown Plan, EE81.3, certified October 18, 1984. This document is an analysis of projected growth in the C-3 District to the year 2000 under the Downtown Plan and five alternatives. The transportation analysis in the EIR includes projections of future modal splits for work and other (non-work) travel for the p.m. peak-period, p.m. peak-hour and daily time periods. This three-volume document is on file and available for public review at the Department of City Planning, 450 McAllister Street.

[4]San Francisco Department of City Planning, Rincon Hill Plan, A Part of the Master Plan, adopted July 18, 1985, page 24.

[5]This deficit-per-ride figure is based upon information provided in: Touche Ross & Co., Transit Impact Development Fee Cost Study, Fiscal Year 1981-82, July 1983, Corrected September 9, 1983, and consultation with Bruce Bernhard, Chief Financial Analyst, San Francisco Municipal Railway, telephone conversations, October 11, 1984, and March 20 and May 13, 1985. The calculation of the peak-period marginal deficit (additional cost per ride minus additional revenue per ride) was done by ESA.

[6]According to Muni, the appropriate technique for determining the costs to Muni of cumulative development is an average cost analysis which would include both capital and operating costs. Application of this technique, however, is limited because relevant capital cost data are not available from Muni. Further, capital costs are difficult to allocate on a person-trip basis, as capital expenditures occur from time to time in large amounts, not necessarily annually. The established method of allocating capital costs is through depreciation, which is based on historical depreciation costs, not replacement costs. Such an estimate would be low in comparison with the costs of new capital improvements required for a single passenger trip. The use of existing capital cost data would underestimate future capital cost needs. Existing Muni accounting statistics do not enable future capital costs to be calculated on a per-passenger-trip basis (Bruce Bernhard, Muni Chief Financial Analyst, telephone conversation, March 25, 1985).

[7]The deficit due to the project would be: 254 peak-period trips per day x 252 working days per year x $0.50 deficit = $32,005. The cost deficit estimate is based on the assumption that essentially all vehicles are operating at capacity during peak periods and additional riders would require new vehicle trips. It was assumed that during off-peak periods, all vehicles operate with excess capacity, resulting in an average off-peak marginal cost of zero. These cost estimates are appropriate for project costs to Muni of a single office building. Assessments of costs that would result from cumulative development require the inclusion of additional cost factors and may be best projected using average cost data. Muni does not have data that would enable it to estimate the average cost per passenger trip. It is reasonable to conclude that average costs would be significantly higher than marginal costs.

[8]Ward Belding, Supervisor, Office of Research, BART, telephone conversations, September 27, 1985. The $1.20 average deficit per trip is based on all operating costs and revenues for the entire system and is not specific to San Francisco trips. Available data from BART do not enable peak and non-peak period costs to be differentiated.

[9]420 BART trips per day x 252 days/year x $1.20 = $127,010.

[10]The number of project vehicle trips is estimated as follows: The number of peak hour and peak period person trips calculated in Table 4 is distributed between various transportation modes as shown in Table 5. Vehicle trips are derived from this table by dividing the person trips by the vehicle occupancy. One person in drive alone vehicles, three for carpools, and five for vanpools.

[11]DKS field survey, July 1985.

[12]Underlying growth factors for the area south of Market Street and west of Sixth Street, were derived from background reports for the Downtown Plan EIR and assume a lower degree of mitigation for Downtown Plan goals. Achievement of Downtown Plan goals would greatly reduce these impacts.

[13]Car ownership per household, 1980 Census Data. The range of auto ownership in the project area is .10 to .60 cars per household; the higher number of .60 was assumed for worst case analysis. As the Rincon Hill Plan area develops, auto ownership figures for the area could change. Recent unpublished surveys of the greater downtown area yielded an auto ownership figure of .76 cars per household.

[14]City Planning Code, Section 152.

[15]Center City Pedestrian Circulation and Goods Movement Study, prepared for the San Francisco Transportation Policy Group by Wilbur Smith and Associates, September, 1980.

[16]It is estimated that 13.4% of all daily person trips take place during the peak noon hour, and that about 90% of these trips are walking (pedestrian trips). About 10.4% of all daily trips take place during the p.m. peak hour, and that about 78% of the trips are walk trips (walk to Muni, walk to BART, etc.).

E. AIR QUALITY

The analysis below includes a brief summary (summaries) of the material in the Rincon Hill Plan EIR. This summarized material is incorporated by reference as follows:

FINAL EIR TEXT

I. SUMMARY. Air Quality Impacts (p. 5).

III. AIR QUALITY SETTING. Existing Regional and Local Air Quality, Emissions Data, (pp. 59-60).

IV. AIR QUALITY IMPACTS. Projected and Cumulative Daily Emissions: Ozone, Carbon Monoxide, Nitrogen Oxides, Hydrocarbons, Total Suspended Particulates, Sulphur Dioxide (pp. 117-120).

V. MITIGATION MEASURES. Air Quality: Measures to Reduce Vehicular Traffic, Measures to Reduce Construction/Demolition Impacts (pp. 139-140).

SUMMARY OF RESPONSES TO COMMENTS

Air Quality (pp. 55-59).

As stated above on page 50, the project, at a less-specific level of detail than here, has been included in the analysis of the Rincon Hill Plan Final EIR. That analysis considered air quality effects of buildout of the Rincon Hill Plan area for a maximum zoning envelope at an unspecified (post-year-2000) future date, and included the project at a non-specific level of detail. The air quality analysis contained in the Rincon Hill Plan EIR presented a worst-case impact analysis, by evaluating the impact of full buildout-generated emissions as a separate addition to emission levels from cumulative growth forecasted for the year 2000 in the Downtown Plan EIR. Emissions from full buildout of the Rincon Hill Plan would not violate any air quality standards. The project would represent about 1.1% (in year-2000) of those pollutant emissions.

The Rincon Hill Plan EIR (Certified July 18, 1985) is available for review at the Department of City Planning, the San Francisco Main Library, and various branch libraries.

Upon completion, the project would affect air quality in two ways. Emissions would be generated by project-related traffic, and by combustion of natural gas for building space and water heating. Transportation sources would account for over 95% of project-related emissions.

Table 7, page 101, shows projected daily emissions of pollutants in 2000 from project-generated traffic, projected daily emissions in 2000 for the greater downtown and C-3 District development projected by the Downtown Plan EIR (EE81.3, certified October 18, 1984), and total emissions projected for the entire Bay Area by the 1982 Bay Area Air Quality Plan. The project would contribute about 1.1% to the total emissions generated by Downtown Plan development, in 2000.[1]

Nitrogen oxides (NOx) and hydrocarbons (HC) are both chemical precursors of ozone. Motor vehicles emit more NOx than HC, and the emissions from building natural gas combustion would consist primarily of NOx. As demonstrated by the Livermore Regional Air Quality model (LIRAQ) regional ozone computer simulations conducted for the 1982 Bay Area Air Quality Plan, an increase in the future NOx emissions compared to HC emissions would lead to a decrease in ozone compared to present levels. This model has also shown that Bay Area ozone concentrations are expected to be within the federal standard in 1987, and thereafter. As the future NOx emissions from cumulative development in San Francisco would exceed future HC emissions, this development would not lead to an increase in total Bay Area ozone concentrations.

At the same time, total emissions of both NOx and HC are expected to decrease in San Francisco. Total NOx emissions would decrease in San Francisco by about two percent from 1984 to 2000, but would increase in the Bay Area by about five percent from 1984 to 2000. It is possible that excess NOx emissions generated by cumulative development (including the project) could increase ozone and/or nitrogenous oxidant concentrations further downwind, outside the Bay Area. In addition, NOx emissions generated by cumulative development (including the project) throughout the Bay Area could increase acid rain further downwind, outside the Bay Area, though to a relatively small extent due to the magnitude of the increase and to dilution over time and distance.

TABLE 7

PROJECTED DAILY POLLUTANT EMISSIONS

Pollutant	Emissions (tons per day)[1] Project 2000[2]	Downtown Plan[3] 2000	Bay Area[4] 2000
Hydrocarbons	.01	0.6	560
Nitrogen Oxides	.01	0.8	492
Carbon Monoxide	.07	6.6	2,170
Particulates	.01	1.3	764
Sulfur Oxides	.001	0.1	225

[1]Project and Downtown Plan emissions calculated using BAAQMD EMFAC6C vehicular emission factors which do not take into account the Inspection and Maintenance Program. Emissions of HC, NOx, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust disturbed from roadway surfaces.

[2]Based upon a weighted daily average of 5,294 miles traveled.

[3]Incremental emissions of C-3 District development, per the Downtown Plan EIR, Vol. 1, Table IV.I.2, p. IV.I.12.

[4]Bay Area Air Quality Management District, Air Quality and Urban Development: Guidelines for Assessing Impacts of Projects and Plans, San Francisco, November, 1985, page VI-6..

Source: EIP Associates.

In 2000 (according to the Downtown Plan EIR), area-wide traffic volumes in the greater downtown area would increase by about 15% over 1984 volumes; average traffic speeds would decrease by about two mph from 1984 speeds. However, in 2000 the average vehicle is expected to emit 43% less carbon monoxide (CO) than in 1984 due to ongoing state and federal emissions controls.

CO concentrations at 11 representative intersections in the downtown study area, as analyzed in the Downtown Plan EIR, would decrease from 1984 to 2000. CO concentrations at 10 of the 11 intersections would be within the state and federal standards in 1990 and 2000 under the Downtown Plan. According to the Downtown Plan EIR, CO concentrations at one intersection (Brannan and Sixth Streets) would continue to violate the state and federal eight-hour standards both in 2000 under the Downtown Plan. However, a reanalysis of this intersection using updated emission factors supplied by the BAAQMD indicates that the violation would be eliminated as a result of the statewide Vehicle Inspection and Maintenance (I/M) program, discussed further below.

The California Legislature has mandated a biennial inspection and maintenance (I/M) program which applies to most cars and light trucks in California. This program went into operation in March 1984. An annual I/M program was evaluated in the 1982 Bay Area Air Quality Plan based on the 1979 source inventory. Based on predicted reduction in hydrocarbons and CO of 25% in vehicles covered, a reduction in total motor vehicle-generated CO of about 18% would be expected. The reduction in total regional CO emissions would be about 16%. The reduction in motor vehicle-generated hydrocarbons would be about 17%; the reduction in total regional hydrocarbon emissions would be about 6%. Vehicle emission factors used in the model for the Downtown Plan EIR did not take the I/M program into account. To account for CO reductions from the I/M program, revised emission factors have been used in the revised Modified Linear Rollback (MLR) model for this project. This is the same version of the revised MLR method which was developed for the Downtown Plan EIR. By not quantifying predicted reductions from the I/M program, CO emissions were overpredicted in the Downtown Plan EIR.

Curbside CO concentrations at selected intersections that would be affected by project-generated traffic and by cumulative development traffic were projected for conservative conditions, and are compared with ambient standards in Table 8, page 103. At

TABLE 8

EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm)[1] 1984	Downtown Plan[2] 2000
First/Harrison	1-hour	10.9	6.7
	8-hour	8.4	4.7
First/Folsom	1-hour	14.6	8.4
	8-hour	11.1	6.3
Folsom/Beale	1-hour	10.6	6.0
	8-hour	8.0	4.4
Bryant/Beale	1-hour	9.5	5.4
	8-hour	7.3	4.0

[1] Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Downtown Plan EIR. Background concentrations were calculated to be 7.4 ppm for one hour and 5.7 ppm for eight hours in 1984 and 4.2 ppm for one hour and 3.0 ppm for eight hours in 2000. Any underlined values are in violation of state or federal CO standards. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour state and federal standards are 9 ppm. Emission rates were derived from the California Air Resources Board's EMFAC6D computer model, as published in the BAAQMD's Guidelines, November, 1985. These emissions take into account the reduction in CO as a result of the ongoing statewide Inspection/Maintenance Program.

[2] Based on the economic forecast methodology contained in the Downtown Plan EIR, the project would be continued in this forecast.

Source: EIP Associates.

First/Folsom the state and federal eight-hour average CO standards are estimated to have been violated in 1984, but these violations would be eliminated by 2000 as a result of ongoing state and federal emission controls. At the three other intersections studied, CO concentrations are estimated to have met the standards in 1984 and to meet the standards thereafter.

Emissions of total suspended particulates (TSP) resulting from construction and from vehicle trips generated by the project and cumulative development would increase TSP concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility.[2]

Emissions of sulfur oxides (SOx) generated by the project and by cumulative development would not bring San Francisco's sulfur dioxide (SO_2) concentrations measurably closer to violating the standard.

The 1982 Bay Area Air Quality Plan contains strategies which consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. As discussed above, emissions associated with the project and with cumulative downtown development under the Downtown Plan are not projected by this EIR or the Downtown Plan EIR to increase ozone concentrations, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan regarding ozone.

Cumulative downtown development had been projected by the Downtown Plan EIR potentially to result in a violation of the eight-hour CO standard at the Brannan/Sixth intersection analyzed therein. By using the revised emission factors which account for the I/M program in the revised version of the MLR contained in the Downtown Plan EIR, the City no longer predicts violations of CO standards at the Sixth and Brannan intersection, or other intersections which have been modeled in the greater downtown. Based on the above, cumulative greater downtown development would not conflict with objectives of the 1982 Bay Area Air Quality Plan regarding CO.

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[1] Impacts anticipated from cumulative downtown development have been analyzed in the Downtown Plan Environmental Impact Report (EIR), EE81.3, certified October 18, 1984.

The air quality setting and impacts discussion in the Downtown Plan EIR (Vol. 1, pp. IV.I.1-19; Vol. 2, pp. 0.1-9; vol. 3, Part 1, pp. C&R-I.1-11) is summarized in the text of this EIR and incorporated by reference herein.

[2]State particulate standards were changed in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. Until the State adopts a method for monitoring fine particulate matter, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards, whether new standards would be violated, or what the health implications would be.

F. ENERGY

Pacific Gas and Electric Company supplies energy to San Francisco customers. Electrical energy is generated from various sources of energy including oil, gas, hydroelectric, geothermal, nuclear, wind, cogeneration and solid waste.[1] In future years PG&E expects to generate electricity from these sources and from coal. The proportion of energy generated from oil and gas is expected to decrease by 1990 with corresponding increases in the proportion of energy generated from other sources listed above.[2]

The site currently contains a surface parking lot and the Coffin-Reddington building, which has been vacant since 1981. There is no significant energy consumption onsite.

Removal of existing structures would require an unknown amount of energy. Fabrication and transportation of building materials, worker transportation, site development, and building construction would require about 39 billion Btu of gasoline, diesel fuel, natural gas, and electricity.[3,4] Distributed over the estimated 50-year life of the project, this would be about 774 billion Btu per year, or about 1.5% of annual building energy requirements.

New buildings in San Francisco are required to conform to energy conservation standards specified by Title 24 of the California Administrative Code. The State allows building developers to comply with the standards through the component performance standards method which requires the incorporation of a set of specific design features, through the use of nondepletable energy resources, or by demonstrating that the building would consume no more than a specified quantity of energy, expressed as Btus per square foot per year (energy budget).[5] Documentation showing compliance with these standards is submitted with the application for the building permit and is enforced by the Bureau of Building Inspection.

Table 9, page 107 shows the estimated operational energy which would be used by the project. Peak electricity demand for the office and commercial space would be about 1,800 kW and would occur on hot summer afternoons in July and August. This would coincide with PG&E's peak electrical load periods which occur during July and August afternoons. Peak electricity demand for the residential space would be about 800 kW and would occur on January mornings.

TABLE 9

ESTIMATED PROJECT ENERGY USE[1]

Allowable Under Title 24 energy Budget	
Total annual Btus[2] per square foot of office space	126,000 Btu
Total annual Btus per square foot of retail space	200,000 Btu
Daily Natural Gas Consumption[3]	
Estimated daily natural gas comsumption per square foot	450 Btu
Estimated peak daily natural gas comsumption	890 Therms
Monthly Electric Consumption[3]	
Estimated monthly electrical consumption per square foot	1.8 kWh (18,430 Btu)
Estimated total monthly electrical consumption	0.2 million kWh (2.0 billion Btu)
Annual Consumption	
Estimated total annual natural gas consumption	208,000 Therms
Estimated total annual electrical consumption	2.9 million kWh (30 billion Btu)
Connected kilowatt load	2,400 Kilowatts
Estimated total annual energy consumption	50 Billion Btu (8,900 barrels of oil)

[1]The project would include 128,536 sq. ft. of office, 2,200 sq. ft. of retail area and 178,650 sq. ft. of residential space. Energy use includes space conditioning, service water heating and lighting in accordance with allowable limits under Title 24. Estimated electricity includes an additional 5 kWh/sq.ft./yr. consumed by appliances such as typewriters, computers, coffeemakers, etc. than assumed by Title 24 estimates.

[2]Btu (British thermal unit): A standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water 1° Fahrenheit (251.97 Calories) at sea level.

[3]These calculations are available for review at the Office of Environmental Review, 450 McAllister Street, San Francisco, California. Natural gas consumption estimates are based on the assumption that 10% of the total energy allowed under Title 24 would be consumed in the form of natural gas.

Note: Energy Conversion Factors:
one gallon gasoline = 125,000 Btu
one kilowatt (kw) = 10,239 Btu assuming operational efficiency of 33%
one therm = 100,000 Btu
one cubic foot of natural gas = 1,100 Btu at source
one barrel of oil = 5,600,000 Btu

Source: EIP Associates.

Peak electricity use would be about .0005% of PG&E's peak load of 16,000 MW.[6] Annual and peak daily consumption are shown in Figure 25, page 109. Peak natural gas consumption would be about 89 million Btu/day and would coincide with PG&E's peak natural gas load periods, January mornings. Peak project use would be about 2.4% of PG&E's peak load of about 3.7 billion Btu per day.[7] Annual and peak daily natural gas consumption are shown in Figure 26, page 110.

Project-related transportation would cause additional, off-site energy consumption (see Table 10, page 111). For the project trip generation described in the Transportation section, page 58, project-related trips would require 230,000 gallons of gasoline and diesel fuel and about 486,200 kWh of electricity annually. The total annual transportation energy demand, converted with at-source factors to a common thermal energy unit, would be about 38 billion Btu. This projected use is based upon the mix of highway vehicles in California in 1987. Vehicle fuel use is expected to decrease as the vehicle fleet becomes more efficient and fuel more expensive.

In the Energy Policy Component of the Environmental Protection Element of the Master Plan, Policy 4 under Objective 2 states that development should "encourage use of energy conserving appliances and lighting systems." To respond to Policy 4 of this objective, the project sponsor would install appliances complying with state Efficiency Regulations (Title 20, Chapter 2, California Administrative Code). The project also would respond to Policy 1 under Objective 4, to "increase the use of transportation alternatives to the automobile." The residential project would be within walking distance of downtown. The project would also combine residential and office uses on one site, which would reduce the number of vehicle trips generated by each use, independently.

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[1] PG&E Annual Report, San Francisco, CA 1982.

[2] PG&E Annual Report, San Francisco, CA 1981.

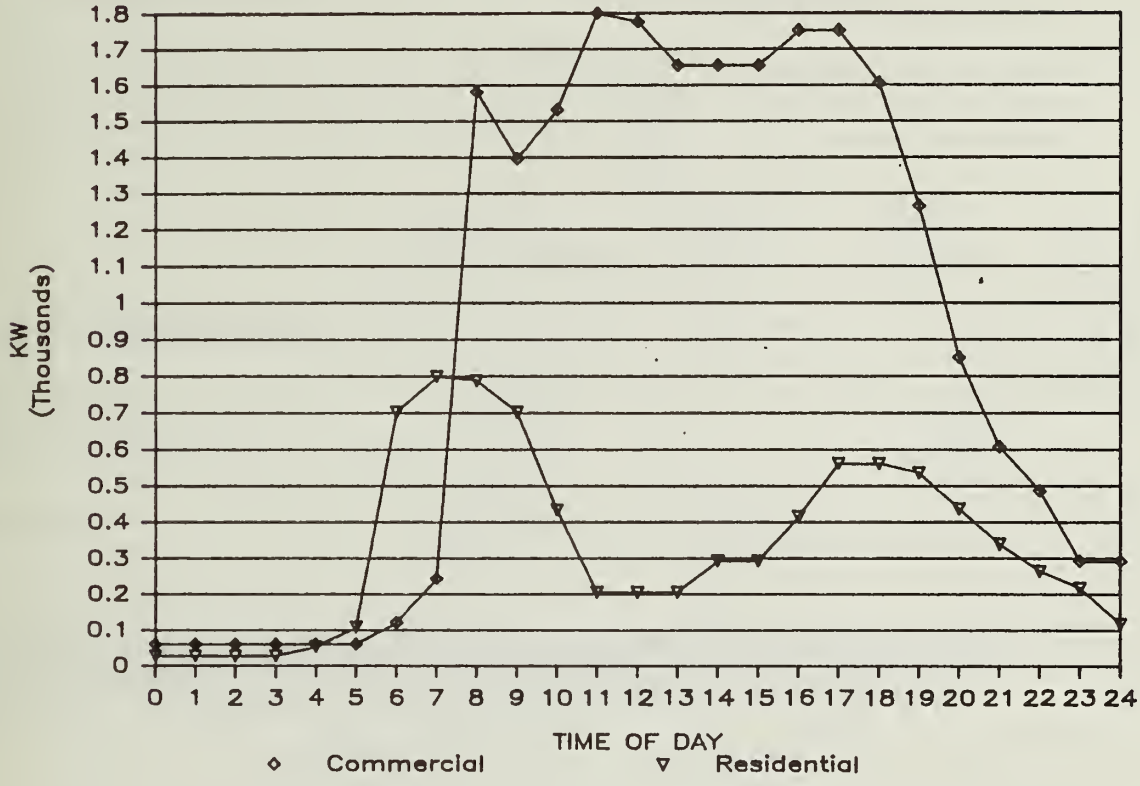
[3] The British thermal unit (Btu) is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea level. The term "at-source" means that adjustments have been made in the calculation of the thermal energy equivalent (Btu) for losses in energy that occur during generation, transmission, and distribution of

TYPICAL ELECTRICITY COMPSUMPTION

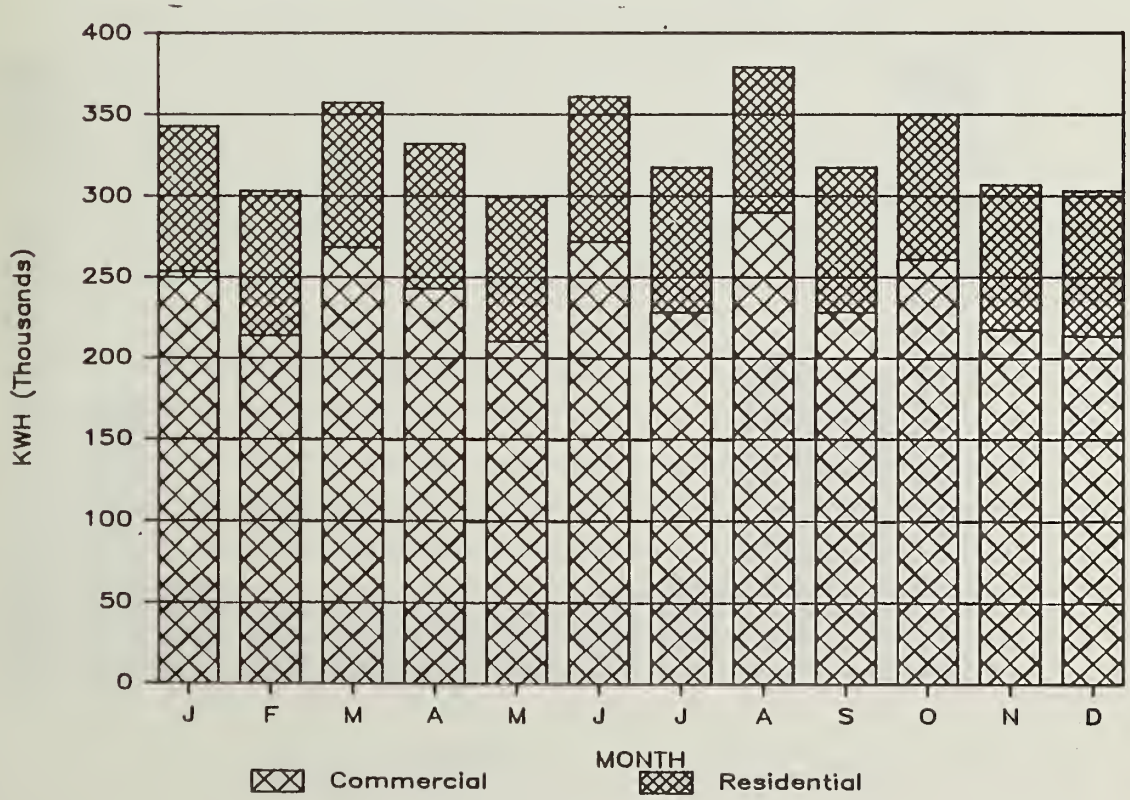
FIGURE 25

SOURCE: EIP ASSOCIATES

HOURLY ELECTRICAL DEMAND



MONTHLY ELECTRICAL CONSUMPTION



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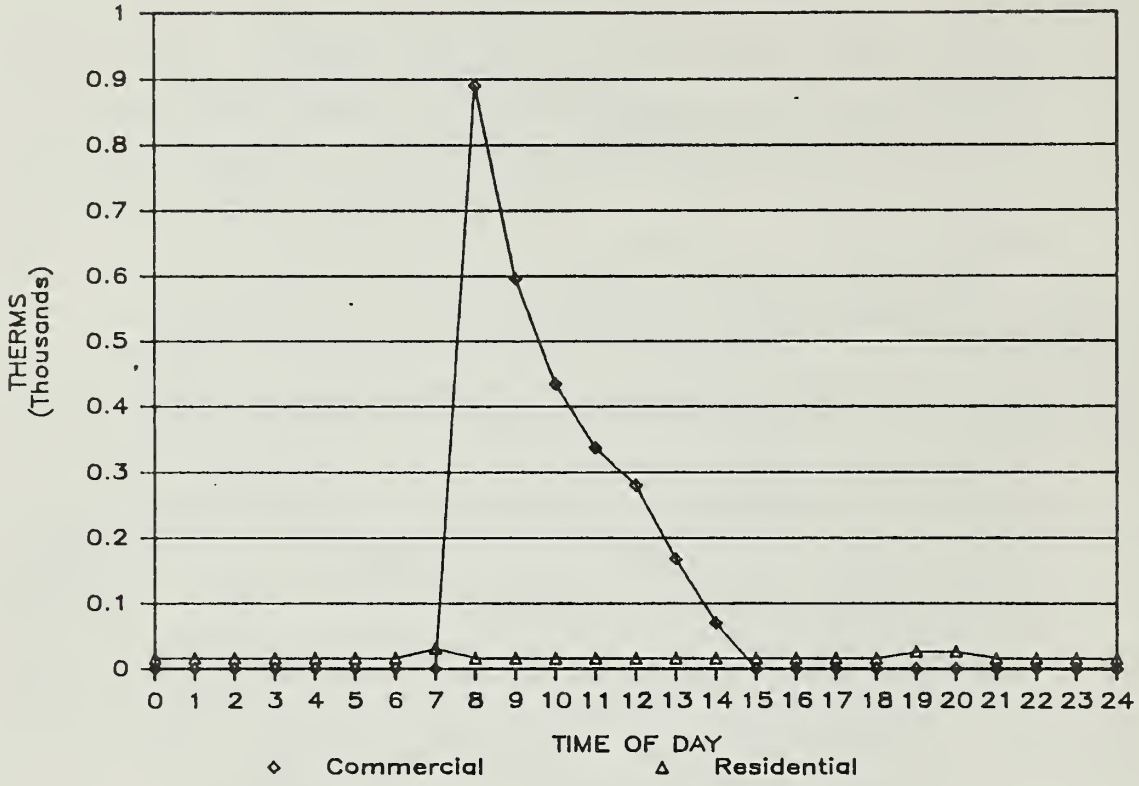
TYPICAL NATURAL GAS CONSUMPTION

FIGURE 26

SOURCE: EIP ASSOCIATES

HOURLY NATURAL GAS DEMAND



MONTHLY NATURAL GAS CONSUMPTION

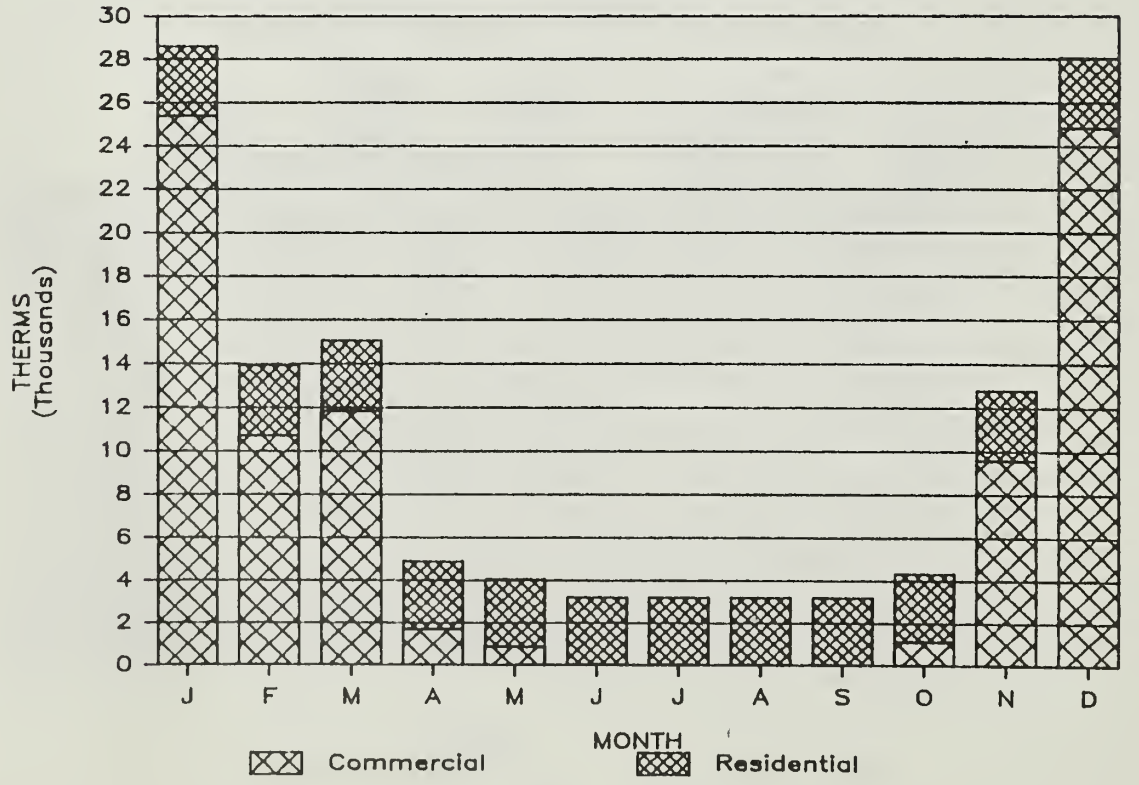


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TABLE 10

PROJECT-RELATED ANNUAL TRANSPORTATION ENERGY CONSUMPTION[1]

	Electricity (kilowatt hours)	Gasoline (Millions) (Gallons)	Diesel (Gallons)	Total Btu (Millions)
Auto/Taxi/Jitney/Motorcycle		223,400		
BART	66,800			
Muni Electric				
Regional Bus Systems	419,400		2,800	
SPRR			2,600	
Project Total	486,200	223,400	5,400	37,500

[1]The methods used to calculate these figures are described in detail in the Downtown Plan EIR, EE81.3, certified October 18, 1984, Appendix N and the associated data is contained Table No. 6. Calculations are also based on 4,155 persons trips per day.

the various energy forms as specified in: ERCDC, Energy Conservation Design Manual for New Non-Residential Buildings, Energy Conservation and Development Commission, Sacramento, California, 1977, and Apostolos, J. A., W. R. Shoemaker, and E. C. Shirley, Energy and Transportation Systems, California Department of Transportation, Sacramento, California, Project #20-7, Task 8, 1978.

[4]Hannon, B. et al, 1978, "Energy and Labor in the Construction Sector," Science 202:837-8470.

[5]State of California Energy Resources Conservation and Development Commission, Conservation Division, Energy Conservation Design Manual for New Nonresidential Buildings, 1984.

[6]San Francisco Department of City Planning, Downtown Plan Environmental Impact Report (EIR), EE81.3, certified October 18, 1984, Vol. 1, page IV.G.3.

[7]Downtown Plan EIR, pp. IV.G.1-IV.G.17.

G. CONSTRUCTION NOISE

The existing noise level at the location of the proposed residential tower and the office building varies from 65-70 dBA.[1,2] The nearest existing residential uses are located on Harrison Street (Apostleship of the Sea) adjacent to the proposed site. At present, these residences are exposed to noise levels between 65 and 70 dBA. Other uses in the project vicinity include offices, manufacturing and light industrial.

Project construction would take place over a maximum of 33 months (Phase I, 9 months; Phase II, 24 months), and would increase noise levels in surrounding areas. Some excavation would be required for Phase II (southwest corner of lot) but no blasting would be necessary. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener. To estimate probable noise impacts, this analysis assumes typical equipment and construction techniques. Table 11, page 114, shows typical exterior noise levels associated with the different phases of construction (see Appendix E, page A-52 for a table of typical noise levels found in the everyday environment). Interior noise levels at 50 ft. from the noise source would be about 10 to 15 dBA less than those shown in Table 11. Closed windows would reduce noise levels by about 20 to 25 dBA below those shown in the table.

Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the City Police Code). The ordinance requires that sound levels of construction equipment other than impact tools not exceed 80 dBA at a distance of 100 feet from the source. Impact tools (jackhammers, pile drivers, impact wrenches) must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. Section 2908 of the Ordinance prohibits construction work at night, from 8:00 p.m. to 7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property line, unless a special permit is authorized by the Director of Public Works.

Phase II of the proposed project would require the driving of piles which would last from about six to eight weeks.[3] Pile driving would generate about 105 dBA at a distance of 50 feet in the absence of mitigation measures. The Department of Public Works allows pile driving operations under certain conditions, which may include specifying relatively quiet

equipment, predrilling pile holes, and/or specifying hours of operation to reduce the number of people exposed to noise effects. With predrilling of holes and shrouds around the piles a reduction of 10-15 dBA is possible. This would produce noise levels of about 80 dBA at the buildings abutting the rear of the site when windows are closed and about 85-90 dBA when windows are open. These noise levels would prevent sleep, interfere with telephone use, and annoy and distract occupants of these buildings. Impacts at other locations within about 1,000 feet (especially those with line-of-sight contact) would also occur in that noise levels would exceed ambient levels by 5-25 dBA depending on the exact distance from the noise source. It is recommended that predrilling of holes and contruction of noise shrouds be included as mitigation measures. Also, because of the proximity of residential uses (Apostleship of the Sea) it is recommended that pile driving be limited to the hours between 9 a.m. and 5 p.m. Phase I would not require pile-driving.

TABLE 11

TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET FROM THE SOURCE

Phase II Construction Phase	Duration of Phase (weeks)[1]	Average Noise Level (dBA)
Ground clearing	4	84
Excavation	8	89
Foundations[2]	12	78
Erection	20	85
Exterior Finishing	26	89

[1] Phases of construction would overlap.

[2] Time includes six to eight weeks of pile driving, noise level is for construction activities other than pile driving (noise levels during pile driving could reach 105 dBA at 50 ft.)

Source: Bolt, Beranek and Newman, December 31, 1971, Noise from Construction Equipment and Home Appliances, vs. Environmental Protection Agency.

During Phase I construction period and the remainder of Phase II construction, impact tools, haul trucks and concrete pumpers would be the major sources of noise. Operation of this equipment would generate between 70 dBA and 95 dBA at a distance of 50 feet. Although less severe than pile driving these levels would also interfere with daytime activities inside the nearby office and residential spaces.

Two additional projects, Hills Brothers Plaza and 59 Harrison, are planned in the project area. Because both of these projects are over 1,000 feet away from 300 Beale, noise levels would not be expected to increase significantly.

The proposed project would include several mitigation measures which would contribute to a lessening of potential construction noise impacts of the project, including requirements that the contractor muffle impact tools and use electric rather than diesel equipment, construct a noise barrier around the site and predrill holes for piles (see pages 122-123).

There would be times, particularly during the operation of pile-drivers when construction noise would interfere with indoor activities in nearby buildings.

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[1]Noise measurements were taken in March 1985 for a continuous 24-hour period by Charles M. Salter Associates. Measurement locations were made on Beale Street, Harrison Street and on the sixth floor of the Apostleship of the Sea on Harrison and Fremont Streets.

[2]Decibel (db): A logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert a force known as sound pressure level (commonly called "sound level") measured in decibels.

dBA Decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels.

[3]Brad Neal, Whisler-Patri, telephone conversation, April 3, 1986.

H. EMPLOYMENT

1. Employment

Direct Project-Generated Employment. The project would accommodate approximately 520 permanent full-time jobs on-site including 481 office workers (at one worker per 267 gsf), 6 retail workers (at one worker per 350 gsf), 11 maintenance employees (at one worker per 12,000 gsf) and 22 parking employees (at one worker per 5,100 gsf). The net increase would be 520 jobs. There are no employees currently on site.

No tenants have leased space in the proposed project at this time. Prospective tenants are anticipated to consist mainly of corporate and professional businesses. Because specific tenants are unknown at this time the projected total number of employees was derived on the assumption of an average number of square feet per employee, by employment type.

Indirect Employment. Indirect employment would be generated by the proposed project. Through the multiplier effect, by which on-site activities and employees create additional employment off-site through off-site expenditures for goods and services, employment would be generated in the Bay Area. On the assumption that the uses on the project site are primarily office intensive uses, about 1,783 additional jobs in other sectors of the Bay Area economy would result from the project.[1] Thus, the total number of permanent Bay Area jobs that would be created by proposed project would be about 2,473 (520 net direct jobs and about 1,783 indirect jobs).

Construction Employment. Project construction would require about 292 person-years of labor, an average of about 106 construction jobs over the 33-month construction period. As a result of the multiplier effect of project construction about 165 construction-related indirect jobs would be created during the construction period. Some of this secondary employment would be in San Francisco, although it is difficult to estimate the amount.

2. Housing

Project-Generated Housing Demand and Housing Policy. To the extent that the project would attract employees from outside the City and contribute to the formation of

additional households by existing City residents, it would also contribute to increased housing demand in San Francisco. Not all of the project's net new employees would seek housing in the City. Some new employees would choose to live outside of the City and others may currently live outside of the City and not necessary change their residence location as a result of a new job location. Some employees could choose to live in the Phase II residential units.

San Francisco's Office Affordable Housing Production Program (OAHPP) requires housing to be provided to offset the demand created by office development, for all projects including more than 50,000 gross square feet of office space. On July 8, 1985, the Board of Supervisors approved the Office Affordable Housing Production Program, Ordinance No. 358-85 (now City Planning Code Section 313) which estimates that a demand for 0.386 housing units is created for each 1,000 gross square feet of office space built. Under these assumptions, the proposed project would generate a local housing demand for 50 housing units.

The project sponsor currently proposes to meet this housing demand by payment of an in-lieu fee in the amount of $686,382.[2]

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[1]The estimates of indirect employment are based on the Association of Bay Area Governments Study, 1980 Hybrid Input - Output Model for the San Francisco Bay Region, April 1984, page XIV. A multiplier of 2.25 was used for office jobs, 0.71 for retail jobs and 1.33 for maintenance jobs. The multipliers used in the analysis are Type II, which includes indirect and induced employment generation, and should be viewed as the theoretical maximum impact level. Actual employment generation would probably be somewhat less.

[2]The Office Affordable Housing Production Program (OAHPP), Ordinance 358-85, was passed by the Board of Supervisors July 8, 1985. It was signed by the Mayor July 19, 1985 and its effective date was August 18, 1985 (now City Planning Code Section 313). The OAHPP requires developments to provide housing at a ratio of 0.386 units per 1,000 gross square feet of net new office space or pay an in-lieu fee computed as follows: net addition gross square feet office space x $5.34=Total Fee.

I. GROWTH INDUCEMENT

The project would include about 128,536 gsf of office space, 178,650 gsf of residential uses, and about 2,200 sq.ft. of retail space (all of which would be a net increase on the site). Employment at the site would increase to about 520 people, from zero. Occupants of the proposed project are not known, but could include tenants expanding or relocating from other San Francisco locations, tenants relocating from outside San Francisco, and firms new to the Bay Area. The increase in employment at the project site, therefore, would not necessarily represent employment that is new to San Francisco. If the project were fully leased, however, and the office space of the project did not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco could increase by about 520 jobs due to the project. Additional jobs also would be supported indirectly in San Francisco through the multiplier effect. The project would also introduce 200 residential units to an area which currently does not have any housing to speak of.

The project, along with the adoption of the proposed Rincon Hill Plan, would further increase the attractiveness of this portion of the South of Market for office and residential development. The project would help establish Rincon Hill as a major new residential area in the City, which could provide between 3,700 and 6,800 new housing units in the City. As a major development within the Rincon Hill Plan area, the project could stimulate and encourage other development, primarily residential, as called for in the Rincon Hill Plan. The project's introduction of commercial and residential land uses would be expected to contribute to rising land values and rents in the South of Market that have been documented by the Department of City Planning.[1]

The City has proposed the Rincon Hill Plan with the intent of encouraging new mixed-use, primarily residential, development in the Rincon Hill Plan area. In addition to project-specific growth inducing effects (e.g., employment), the 300 Beale project would have indirect growth inducing effects as a development that is expected to have a role in implementing the Rincon Hill Plan by encouraging development in the Rincon Hill area.

The project addresses the land use policies and intent of the Rincon Hill Plan. Therefore, many of the growth inducing aspects of the project also would be a direct result of policies proposed by the City.

The project and proposed residential uses in the Rincon Hill Plan area could stimulate development in the Rincon Point -- South Beach Redevelopment Area, particularly the retail, office, hotel and open space uses approved in Rincon Point Subarea located north and east of the site.

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[1] Dean Macris, Director of Planning, San Francisco Department of City Planning, "Memorandum: South of Market Interim Controls," January 26, 1982.

V. MITIGATION MEASURES

In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been or would be adopted by the project sponsor or project architects or contractors and are proposed as part of the project. Some measures are under consideration and others have been rejected. Implementation of some may be the responsibility of public agencies. Measures under consideration or measures rejected by the sponsor may be required by the City Planning Commission as conditions of project approval. Each mitigation measure and its status are discussed below. Where a measure has not been included in the project, the reasons for this are discussed.

Mitigation measures below preceded by an asterisk (*) are from the Initial Study (see Appendix A, p. A-27).

A. VISUAL QUALITY

Measure Proposed As Part Of The Project

* o In order to reduce obtrusive light or glare, the project sponsor would use no mirrored glass on the building.

B. CULTURAL RESOURCES

Measure Proposed As Part Of The Project

o The sponsor would retain the services of an archaeologist. The Environmental Review Officer (ERO) in consultation with the President of the Landmarks Preservation Advisory Board (LPAB) and the archaeologist would determine whether the archaeologist should instruct all excavation and foundation crews on the project site of the potential for discovery of cultural and historic artifacts, and the procedures to be followed if such artifacts are uncovered.

Given the strong possibility of encountering the remains of cultural or historic artifacts within the project site, prior to the commencement of foundation excavations the project sponsor would undertake a program of archaeological testing. This would consist of observation and monitoring by a qualified historical archaeologist of site clearance of at least any materials below existing grade level, and either the placement of a series of mechanical, exploratory borings or other similar on-site testing methods. The archaeologist would supervise the testing at the site to determine the probability of finding cultural and historical remains. At the completion of the archaeological testing program, the archaeologist would submit a written report to the ERO, with a copy to the project sponsor, which describes the findings, assesses their significance and proposes appropriate recommendations for any additional procedures necessary for the mitigation of adverse impacts to cultural resources determined to be significant.

An archaeologist would be present during site excavation and would record observations in a permanent log. The ERO would also require cooperation of the project sponsor in assisting such further investigations on-site as may be appropriate prior to or during project excavation, even if this results in a delay in excavation activities.

In addition, a program of on-site construction monitoring by a qualified archaeologist, designed to allow for the recovery of a representative sample of the cultural materials existing on the site, would be implemented by the project sponsor. This monitoring and recovery program would result in a written report to be submitted to the ERO, with a copy to the project sponsor.

Should cultural or historic artifacts be found following commencement of excavation activities, the archaeologist would assess the significance of the find, and immediately report to the ERO and the President of the LPAB. Upon receiving the advice of the consultants and the LPAB, the ERO would recommend specific mitigation measures, if necessary. Excavation or construction activities following the preconstruction archaeological testing program which might damage the discovered cultural resources would be suspended for a maximum of four weeks (cumulatively for all instances that the ERO has required a delay in excavation or construction) to permit inspection, recommendation and retrieval, if appropriate.

Following site clearance, an appropriate security program would be implemented to prevent looting. Any discovered cultural artifacts assessed as significant by the archaeologist upon concurrence by the ERO and the President of the LPAB would be placed in a repository designated for such materials (site not yet determined). Copies of the reports prepared according to these mitigation measures would be sent to the California Archaeological Site Survey Office at Sonoma State University.

C. TRANSPORTATION

Measure Under Consideration by the Project Sponsor

- The project sponsor would be responsible for widening the sidewalk on the west side of Beale Street from Harrison to Folsom Streets. In addition to enhancing the site this would improve pedestrian access to the downtown. Wider sidewalks, which would involve narrowing of a public street, would require approval from both the City Planning Commission and the Department of Public Works.

Measure Proposed As Part of the Project

- On-site transportation brokerage services would be provided for the life of the project to coordinate measures that are a part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information. The transportation management program and the responsibilities of the provider of the transportation brokerage services would be detailed in a Memorandum of Agreement between the project sponsor and the Department, which would be executed prior to issuance of an occupancy certificate.

- As called for by the Rincon Hill Plan, the project sponsor would provide a pedestrian plaza, in the middle of the project site, that ultimately, with full build-out of the Rincon Hill Plan, would run in an east-west direction between Folsom and Harrison Streets.

- As indicated in the Rincon Hill Plan Final EIR, on page 136, the provision of new housing units close to the downtown area would tend to reduce demand on regional highways and transit systems. The proximity of new housing to downtown employment opportunities would encourage journey-to-work trips by foot, or by short local transit trips.

- To reduce the potential for conflicts between construction vehicles and regular traffic using Beale Street during the peak periods of 7:00-9:00 a.m. and 4:00-6:00 p.m., a member of the construction staff would be designated "construction vehicle coordinator," responsible for monitoring truck movement into and out of the project site.

Measures That Could Be Implemented by Public Agencies

- Pacific Gas & Electric Company could coordinate work schedules with other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities could be installed at the same time as the street is opened for construction of the project to minimize street disruption.

- The City could implement the transportation improvements described in the Rincon Hill Plan. Some of these include: extending the 1-California, 41-Union or other Muni line to Rincon Hill; combining bus and carpool lanes to alleviate congestion at First and Harrison; and building intercept parking suitable for downtown commuters. Cumulative transportation impacts within San Francisco would be reduced by the improvements, and, to the extent that San Francisco could influence transportation improvements recommended by the Plan for areas outside the City, regional cumulative impacts caused by downtown growth would also be reduced.

- The City could act to implement the transportation mitigations described in the Rincon Hill Plan Final EIR, Section V, Mitigation, pp. 136-139. These measures include, in summary: extension of existing Muni routes currently terminating at the Transbay Terminal; constructing a Muni Metro turnaround at The Embarcadero; implementation of the Muni "E" streetcar line; development of a common transit fare

system, or regional transit pass. Some of the Implementing Actions would require approval by decision-makers outside the City and County of San Francisco; many of the measures would require action by City agencies other than the City Planning Commission, such as the San Francisco Public Utilities Commission and/or Board of Supervisors. These measures are system-wide measures that must be implemented by public agencies. Other than project-specific measures such as the relevant transportation mitigation measures described above as part of the project, it is not appropriate to impose mitigation at system-wide levels on individual projects.

D. AIR QUALITY

Measures Proposed As Part Of The Project

* o The project sponsor would require the general contractor to sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50%; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soil, sand, or other such material; and sweep streets surrounding construction sites at least once a day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of a construction period.

E. NOISE

Measures Proposed As Part Of The Project

o The project sponsor would require that the construction contractor predrill holes for piles, in order to minimize noise and vibration from pile driving. The actual pounding from pile driving would occur during a five- to eight-minute span per pile. Nighttime pile driving would require a work permit from the Director of Public Works, pursuant to San Francisco Noise Ordinance Section 2970(c). The project sponsor would schedule pile driving so as to disturb the fewest people, as determined by the Department of Public Works.

- The project sponsor would require the general contractor to construct barriers around the site and stationary equipment such as compressors, which would reduce construction noise by as much as five dBA and to locate stationary equipment in pit areas or excavated areas as these areas would serve as noise barriers.

- The project sponsor would require the project contractor to muffle and shield intakes and exhaust, shroud or shield impact tools, and use electric-powered rather than diesel-powered, construction equipment, as feasible, so that noise would not exceed limits stated in the City's Noise Ordinance (Article 29, San Francisco Administrative Code, 1972).

- As recommended by the Environmental Protection Element of the San Francisco Master Plan, an analysis of noise measurements would be prepared by the project sponsor and recommended noise insulation features would be included as part of the proposed building. For example, such design features could include fixed windows and climate control.

F. HAZARDS

Measure Proposed As Part Of The Project

* o An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to ensure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance by the Department of Public Works of final building permits.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

This chapter is subject to final determination by the City Planning Commission as part of its certification process for the EIR. Chapter VI of the Final EIR will be revised, if necessary, to reflect the findings of the Commission.

No project-specific significant impacts have been identified. Mitigation measures included as part of the project are described in Chapter V, Mitigation Measures, p. 119.

Cumulative development in downtown San Francisco would have a significant effect on the environment in that it would generate cumulative traffic increases as well as cumulative passenger loadings on Muni, BART and other regional transit carriers. These cumulative transportation impacts would cause violations of the total suspended particulate (TSP) standard in San Francisco with concommitant health effects and reduced visibility. The proposed project, due to its proximity to the C-3 district, would contribute to these cumulative effects.

In the past, EIRs for projects in downtown San Francisco have found cumulative effects due to potential violations of carbon monoxide (CO) standards in San Francisco. CO was over-predicted in these EIRs due to reductions in vehicle emissions from the Vehicle Inspection and Maintenance (I/M) program which were not previously accounted for in the CO calculations. When these emission reductions are accounted for, as has been done in the cumulative analysis for CO in this EIR, there would no longer be predicted violations to CO standards due to cumulative downtown development in San Francisco.

VII. ALTERNATIVES

This chapter identifies alternatives to the proposed project, discusses environmental impacts associated with these alternatives, and gives the reasons the alternatives were rejected in favor of the project. Regardless of the sponsor's reasons for rejection, the City Planning Commission could approve an alternative instead of the proposed project if the Commission believed the alternative would be more appropriate for the site.

A. ALTERNATIVE A: NO PROJECT

This alternative would entail no physical change to the site as it now exists. The existing building on the site would remain vacant. Cars would continue to park on the surface lot.

The environmental characteristics of this alternative would be generally as described in Chapter III of this report, Environmental Setting, pages 21-43. Current intensity of land use, present levels of traffic, air quality, noise, shadows and visual effects now attributable to the site would continue.

The impacts identified in Chapter IV, Environmental Impacts, including more intense land uses, employment populations, increased vehicular and pedestrian traffic, construction noise, energy use and shadows would not occur.

This alternative would leave the site open for future development proposals that could be similar to the proposed project.

The sponsor has rejected this alternative because it would like to renovate the existing building and use it to its full potential. In the project sponsor's opinion, this alternative would not allow creation of a commercial and residential development which represents

the highest and best use of the existing property, consistent with current zoning and the policies of the Rincon Hill Plan.

B. ALTERNATIVE B: PHASE I WITH PARKING ON-SITE/PHASE II WITH PARKING ON-SITE

1. Basement Garage

Alternative B would involve the Phase I office conversion and would accommodate its own parking requirement in a basement garage beneath the building. The Phase II structure would include residential and commercial parking only. The proposed project has both the office and residential parking located in the Phase II structure and during the construction of Phase II the existing parking lot which would have accommodated the Phase I demand would be removed. Alternative B would avoid this temporary displacement situation with regard to parking.

In this alternative a basement garage, with three subgrade levels containing 119 spaces would be excavated beneath the existing building. The garage would be accessed from Beale Street. The office square footage would remain the same as the proposed project. The Phase II structure would remain the same as the proposed project except that 119 parking spaces would be eliminated. The spaces for residential and commercial parking would occupy three levels of parking, two less than proposed. Open space uses would remain the same. The design of Phase II would be the same as the project.

All impacts of this alternative would be the same as for the project, except for construction noise, construction traffic and air quality. The depth of excavation required for this alternative could result in a greater potential for the discovery of archaeological artifacts, which could possibly require a more stringent mitigation measure than already included in the project. Excavation of the garage levels would extend construction activity beyond the nine months envisioned for the Phase I rehabilitation. Excavation and foundation shoring and underpinning would last about three to four months. Truck activity would be increased to haul the spoils away and bring new materials to the site. Increased construction activity would result in higher levels of exhaust, dust and particulates released into the air. Extended construction could also interfere with the transportation network due to increased construction vehicle activity. Noise and air quality impacts would be temporary, lasting as long as the construction schedule.

The project sponsor has rejected this alternative because, in the project sponsor's opinion, the close column spacing creates an inefficient parking layout which requires three floors of parking and it is infeasible from both an engineering and cost standpoint to excavate and construct three subgrade levels beneath the existing building.

2. Parking Within 800 Feet

A variant of Alternative B would involve locating the required parking within 800 feet of the office use. Section 159(c) of the Planning Code permits required off-street parking to be located within 800 feet of the use being served. The off-street parking must be available for the actual lifetime of the structure or use to be served and must either be owned by the sponsor or secured by a long-term lease.

The project sponsor has rejected this variant because, in its opinion, the management of such an arrangement would be untenable.

C. ALTERNATIVE C: PHASE I, ALL OFFICE/NO HOUSING

Alternative C would consist of Phase I buildout only. No housing would be constructed onsite. The existing Coffin-Reddington building would be rehabilitated as proposed. Open space would be provided at a ratio of one foot to 50 feet (128,536/50 = 2,571). The open space would be located in a plaza on the south side of the building. Required parking, 119 spaces, could be accommodated on the lot where Phase II would have been located. The existing public parking lot would, if assigned to the office building, be considered an accessory use to the Phase I development. Section 159(c) of the Planning Code permits required off-street parking to be located within 800 feet of the use being served.

Impacts related to visual quality would not differ significantly from the existing setting described in Chapter III.B. Improvements to the existing building and development of a pedestrian plaza would have a positive visual impact. Views of the site and from the site would remain unchanged. Shadows and wind effects would remain at current levels.

Without the residential portion of the project, the site's population would be limited to daytime employees. This alternative would produce a work force of about 480 people who would arrive at the building in the morning and leave in the evening. There would be no

resident population. The office project would have a housing requirement of 50 units (with 62% reserved for low- and moderate-income households) under City Planning Code Section 313, the Office Affordable Housing Production Program (OAHPP). All units would be provided offsite.

This alternative would generate about 56% of the person-trip-ends generated by the project. Consequently, levels of transportation, air quality and energy would be less than the proposed project. Vehicle trips and trips on transit from Alternative C would be about 90% of those generated by the project. The office portion of the proposed project accounts for a larger portion of transportation impacts than the housing would. Energy consumption would also be reduced by about 50% from project levels. Air quality effects would be about 60% less, as well.

Construction of this alternative would last about nine months. The construction impacts that would result from the 24-month schedule anticipated by Phase II would not occur.

The sponsor has rejected this alternative because the sponsor thinks that the project as proposed represents the highest and best use of the existing property, consistent with current zoning and objectives of the Rincon Hill Plan.

D. ALTERNATIVE D: ALL HOUSING WITH TOWER

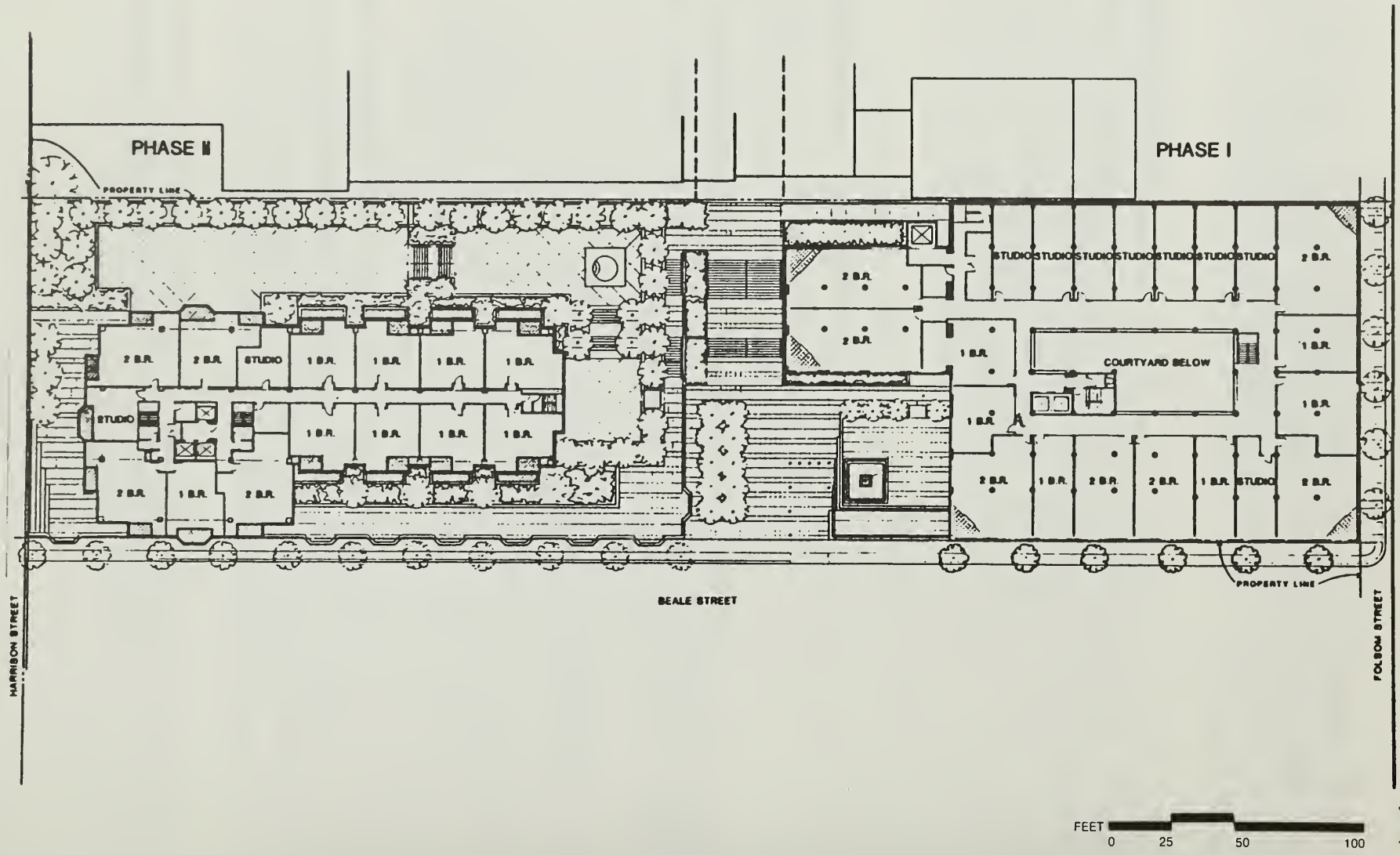
This alternative would involve converting the existing building to housing in Phase I, and constructing Phase II as proposed. A typical floor plan is shown in Figure 27, page 130. A maximum of 171 units would be allowed under current density restrictions set by Section 249.1(d)(3) of the Code. The converted building would contain 107 units, or 116,500 gsf. Conditional Use authorization would be required to allow residential uses in an M-1 District. 107 parking spaces would be required and would be provided in the Phase II residential/parking structure. 8,962 square feet of open space would be required. This alternative would still include 2,200 square feet of neighborhood-serving retail space.

Conversion of the existing building to residential uses would involve considerable modification. The large floorplate of the existing building, originally designed for

ALTERNATIVE D: TYPICAL FLOOR PLAN

FIGURE 27

SOURCE WHISLER-PATRI



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warehousing, would necessitate the construction of an interior lightwell. Units would be arranged around the lightwell and along the perimeter of the existing walls. Those units toward the rear (west side) of the building would only receive natural light from the central lightwell due to a lack of windows on the west wall, which is on the property line.

Due to the elimination of office space of this alternative, compared to the project, transportation, air quality and other impacts would be reduced by about 60%. Alternative D would generate 1,522 less person-trip-ends than the proposed project. About 39 new Muni trips would be generated during the p.m. peak-period, about 90 less than the proposed project. Wind and shadow effects would be the same as for the project.

The project sponsor has rejected this alternative because it considers the existing building to be less suited for residential uses than office uses due to the difficulty of converting a warehouse floorplate to habitable residential space. In particular, the units on the west side of the building would be, in the sponsor's opinion, difficult to market because of the lack of light, air and views.

E. ALTERNATIVE E: ALL HOUSING, WITHOUT TOWER

Alternative E would be limited to the conversion of the Coffin-Reddington building to housing. The typical floor plan would be the same as shown on Figure 26 without the Phase II portion. As with Alternative D, 107 units would be created. 8,962 square feet of open space would be required and would be provided in the form of a public plaza and a courtyard common to the residents of the project. The remainder of the site would be used for residents' parking. Residential parking is permitted on a residential site.

Conversion of the existing building to residential uses would follow the procedure described above in Alternative D.

All of the impacts associated with the buildout of the Phase II structure would be avoided. Wind and shadow effects would not change from the current setting described in Chapter III.C, pages 21-43. Other than the outside improvements to the buildings and landscaping, the site would visually appear much the same as it does now. Views of and from the site would remain unchanged. Construction noise impacts resulting from buildout of Phase II would not occur, and those associated with Phase I would be primarily confined to interior rehabilitation.

In terms of transportation and air quality impacts, Alternative E would have the least impacts, compared to the proposed project and the other alternatives. Alternative E would generate about 803 person-trip-ends; less than 10 vehicle trips in the peak-period; and about 12 transit trips during the peak-period. This would be about 80% less than the proposed project. Air quality impacts would be similarly reduced.

The project sponsor has rejected this alternative because it considers the existing building to be less suited for residential uses than office uses due to the difficulty of converting a warehouse floorplate to habitable residential space. In particular, the units on the west side of the building would be, in the sponsor's opinion, difficult to market because of the lack of light, air and views.

VIII. EIR AUTHORS AND PERSONS CONSULTED

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DEPARTMENT OF CITY PLANNING 450 McALLISTER STREET · SAN FRANCISCO, CALIFORNIA 94102

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: February 14, 1986

Lead Agency: City and County of San Francisco, Department of City Planning
450 McAllister Street - 5th Floor, San Francisco, CA 94102

Agency Contact Person: Paul Maltzer Telephone: (415) 558-5261

Project Title: 85.58E
300 Beale Street

Project Sponsor: Lincoln-Beale

Project Contact Person: Bernard Yosten

Project Address: 300 Beale Street

Assessor's Block(s) and Lot(s): 3747/1 & 1B

City and County: San Francisco

Project Description: Southwest corner of Folsom/Beale; proposed renovation of Coffin-Reddington building into 128,500 g.s.f. office space plus new construction of two 19-story residential structures containing a total of 179,000 g.s.f. residential; 103,000 g.s.f. parking; 4,700 g.s.f. retail; and 16,500 g.s.f. open space.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: February 24, 1986.

An appeal requires: 1) a letter specifying the grounds for the appeal, and;
2) a $35.00 filing fee.

for BARBARA W. SAHM, Environmental Review Officer

BWS:eh
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300 BEALE STREET

INITIAL STUDY

85.58E

February 14, 1986

I. PROJECT DESCRIPTION

Lincoln-Beale, the project sponsor, proposes to develop a mixed use project comprised of residential, office, retail, parking and open space uses on Assessor's Block 3747, Lots 1 and 1B, bounded by Beale, Harrison, Folsom and Fremont Streets (Figure 1, page 2). The project site is located in the Rincon Hill area of San Francisco.

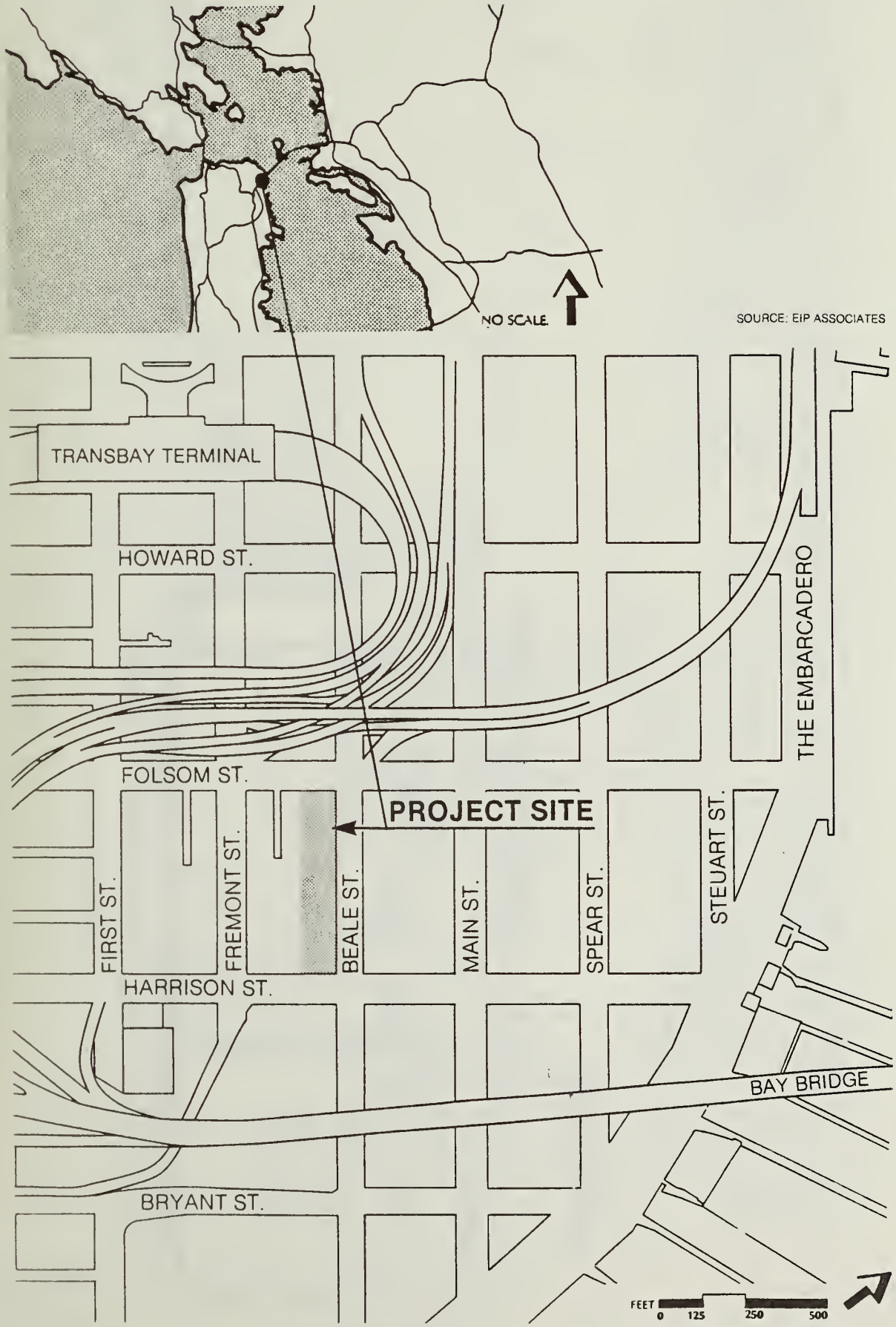
The proposed mixed-use project would be developed in two separate phases. Phase I would involve the renovation and conversion of the Coffin-Reddington building into office space (Figure 2, page 3). Phase II would consist of the construction of two 19-story residential towers each containing 15 stories of residential units above a 4½-story parking structure located on the surface parking lot site (Figure 3, page 4).

The 75,669-square-foot site currently contains a 121-space, long-term, surface-level parking lot and the Coffin-Reddington building, a former office/warehouse which has been vacant since June 1981.[1] In the first phase the Coffin-Reddington building, a six-story concrete structure would be rehabilitated and converted into office space, containing approximately 128,536 gross square feet. In the second phase the surface parking lot would be the site for the construction of a 19-story structure containing two 15-story towers of residential units above 4½ floors of parking (Figures 2 and 3, pages 3 and 4). One level of parking would be below grade. Combined, the new towers and parking structure would contain 200 dwelling units and 329 parking spaces. There would be about 303,000 gross square feet of developed space. Of this area 178,680 sq.ft. would be residential; 103,209 sq.ft. would be for parking; 16,500 sq.ft. would be open space; and 4,685 sq.ft. would be for retail uses. The residential units would range from 525 sq.ft. to 950 sq.ft. Proposed uses on the site are shown in Table 1, page 5.

The office project would be 66 feet tall, the height of the existing Coffin-Reddington building. The residential tower would be about 150 feet high from Harrison Street (200 feet in height from Beale Street). A landscaped plaza, open to the public, would function

PROJECT LOCATION MAP

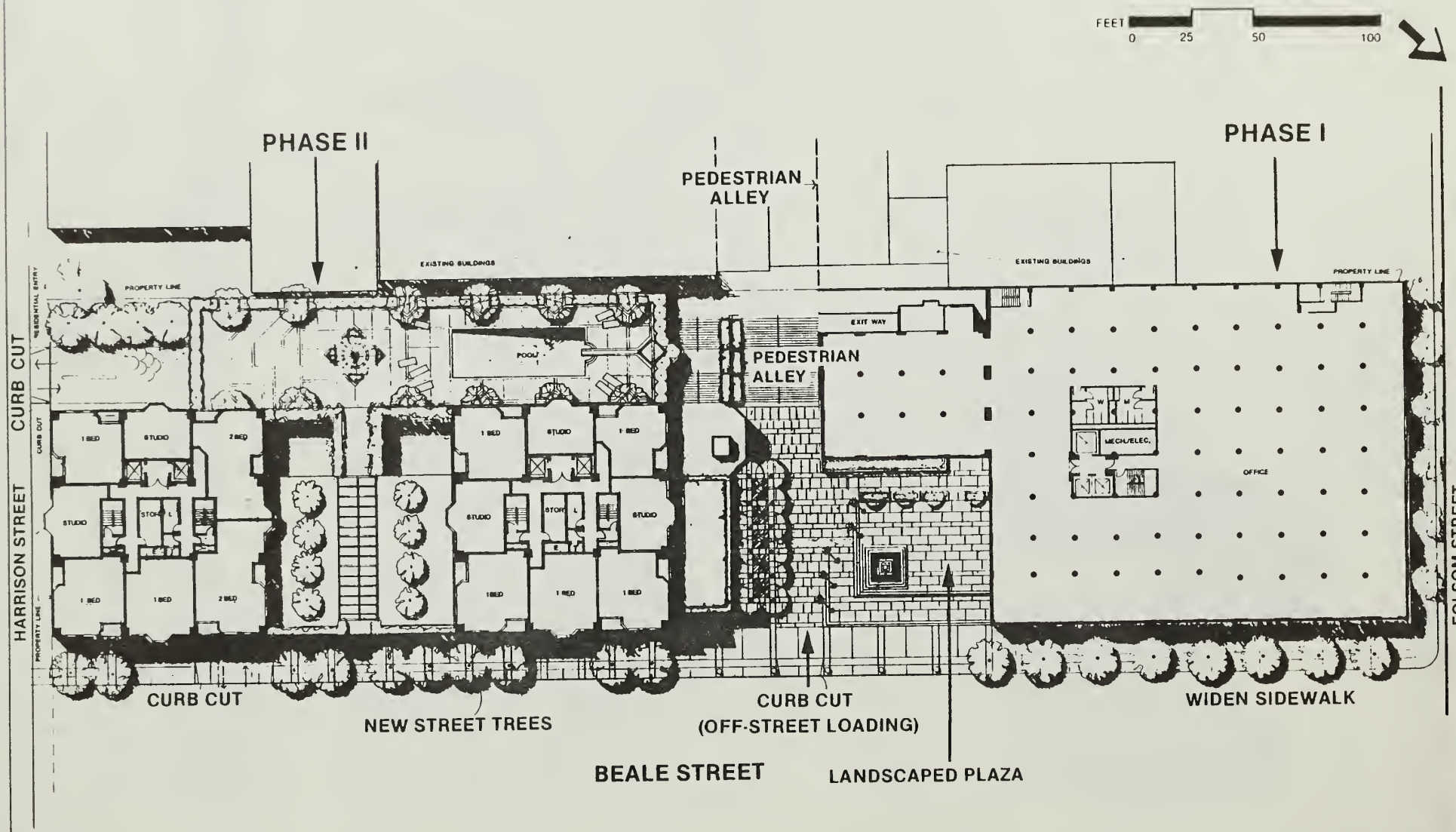
FIGURE 1



TYPICAL FLOOR/PLAZA PLAN

FIGURE 2

SOURCE WHISLER-PATRI



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EAST ELEVATION (BEALE STREET)

FIGURE 3

SOURCE WHISLER-PATRI

FEET 0 25 50 100

A-5 4

85003

TABLE 1

GROSS SQUARE FOOTAGE OF FLOOR AREA BY TYPE OF USE

Use	Rehabilitation	New Construction	Total
Office (Phase I)	122,588	5,948*	128,536
Residential (Phase II)	--	178,680	178,680
Commercial (Phase II)	--	4,685	4,685
Subtotal**	122,588	189,313	311,901
Open Space (Phase II)	--	16,500	47,069
Parking (Phase II)***	--	103,209	103,209

*Includes additions to first, second and sixth floor of Coffin-Reddington Building.

**Does not include areas exempt from FAR calculations, such as mechanical space, parking and loading, and basement storage, per Planning Code.

***For Phase I the surface lot (site of Phase II) would be resurfaced, providing 129 spaces.

Source: Lincoln-Beale and Whisler-Patri Architects

as the entry to the office building and abut the pedestrian alley, called for by the Rincon Hill Plan, which extends east-west through the site and connects to the residential structure (Figure 2, page 3). Access to the garage would be from Beale Street at ground level and from the fifth level on Harrison Street. The upper portion of the garage would be reserved for residential use, however both residents and nonresidents could enter from Beale or Harrison Street. For Phase I and Phase II, three off-street loading areas would be provided for delivery vehicles off of Beale Street. Two ground-level docks would be located in the south tower of Phase II. The third loading area would be in the through-block alley (see Figure 2) and would primarily serve the Phase I portion of the project.

The project architects are Whisler-Patri of San Francisco.

Estimated cost of construction for both phases is $19,350,000 (Phase I: $4,350,000; Phase II: $15,000,000). It is anticipated that Phase I would take about nine months to complete and Phase II would take about 24 months to complete.

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[1]Bernard Yosten, Project Manager, Lincoln-Beale, telephone conversation, March 14, 1985.

II. INTRODUCTION

A tiered EIR will be prepared for the proposed 300 Beale Street project pursuant to Sections 21093 and 21094 of the Public Resources Code, California Environmental Quality Act (CEQA). The EIR will be tiered from the Rincon Hill Plan EIR (82.39E, certified July 18, 1985) and will analyze project-specific impacts. The EIR will discuss potentially significant effects that were not examined in the Rincon Hill Plan EIR and will include applicable mitigation measures for site specific effects. Cumulative impacts of the development forecast in the Rincon Hill area are addressed in the Rincon Hill Plan EIR. That cumulative analysis will not be repeated in the EIR for this project. The Rincon Hill Plan EIR may be examined at the Department of City Planning, 450 McAllister Steet; the San Francisco Main Library; and various branch libraries.

Tiered Environmental Impact Report

Where a prior environmental impact report has been prepared and certified for a program, plan, policy or ordinance, the lead agency for a later project that meets the specified requirements is required (as of January 1, 1986) to examine significant effects of the later project upon the environment, with exceptions, by using a tiered report.

Agencies are required to tier EIRs which they prepare for separate but related projects including general plans, zoning changes and development projects, in order to avoid repetitive discussions of the same issues in successive EIRs and ensure that EIRs prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate on environmental effects which may be mitigated or avoided in connection with the decision on each later project. Tiering is appropriate when it helps a public agency to focus on the issues ripe for decision at each level of environmental review and in order to exclude duplicative analysis of environmental effects examined in previous environmental impact reports. Environmental impact reports shall be tiered whenever feasible, as determined by the lead agency.

The law directs that where a prior EIR has been prepared and certified as noted above, the lead agency shall examine significant effects of the later project on the environment by using a tiered EIR, except that the report on the later project need not examine those effects which were either mitigated or avoided as a result of the prior EIR, or, examined at a sufficient level of detail in the prior EIR to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

The Initial Study is to assist the lead agency in making the determinations required for tiering.

III. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

A. POTENTIALLY SIGNIFICANT EFFECTS

The proposed project is examined in this Initial Study to identify potential effects on the environment. The cumulative impacts of growth in the Rincon Hill area were adequately analyzed in the Rincon Hill Plan EIR. That analysis of cumulative impacts remains current and valid and the determination during certification of that EIR regarding significant effects remains unchanged. Some project-specific potential effects have been determined to be potentially significant, and will be analyzed in an environmental impact report (EIR). They include:

- o Land Use
- o Effects of the project on nearby and distant views
- o Employment
- o Transportation, Circulation and Parking
- o Traffic-generated Air Quality
- o Shadows and wind
- o Energy

B. INSIGNIFICANT EFFECTS

The following environmental effects were determined either to be insignificant or to have been mitigated to an insignificant level through measures incorporated into the project design. These require no further study and will not be addressed in the EIR.

Visual Quality: The project would not have a substantial, demonstrable negative aesthetic effect, nor would it produce substantial light or glare (see Mitigation Measure No. 1, page 26).

Population: The proposed project would not displace people (involving either housing or employment). The project would comply with the Office Affordable Housing Production Program ordinance. Cumulative and indirect effects including those of the project are addressed in the Rincon Hill Plan EIR.

Noise: Operation of the project would not perceptibly increase noise levels in the project vicinity. Noise reduction measures would be incorporated into the project to address potential noise impacts during operation.

Air Quality: The project would not expose sensitive receptors to substantial pollutant concentrations or permeate its vicinity with objectionable odors. Construction activities would temporarily increase exhaust emissions, dust and particulates. Mitigation measures regarding construction air quality have been included in the project (see Mitigation Measure No. 2, page 26).

Utilities/Public Services: Increased demand for public services and utilities attributable to the proposed project would not require additional personnel or equipment. The providers of utilities and public services have been contacted and have responded that they have adequate capacity to serve the project. Cumulative and indirect effects including those of the project are addressed in the Rincon Hill Plan EIR.

Biology: The project would have no effect on plant or animal life on-site or in the surrounding area.

Geology/Topography: The project would be constructed under the supervision of California-licensed structural and geotechnical engineers and would comply with all applicable seismic and life safety standards.

Water: The majority of the project site is currently covered with an impervious surface. The project would not degrade water quality of groundwater, or cause flooding, erosion or siltation.

Hazards: The proposed project would not be affected by hazardous uses nor would it cause health hazards. A mitigation measure regarding an evacuation and emergency response plan has been included in the project (see Mitigation Measure No. 3, page 26).

Cultural: The project would not conflict with any recreational, scientific, religious or educational uses. A historic building would be preserved. A mitigation measure has been included should excavation unearth any cultural or historic artifacts (see Mitigation Measure No. 4, page 27).

IV. ENVIRONMENTAL SETTING AND EFFECTS

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS

		Not Applicable	Diseussed
1.	Discuss any variances, special authorizations, or changes proposed to the City Planning Code or Zoning Map, if applicable.	___	X
*2.	Discuss any conflicts with the Comprehensive Plan of the City and County of San Francisco, if applicable.	___	X
*3.	Discuss any conflicts with any other adopted environmental plans and goals of the City or Region, if applicable.	X	___

On May 27, 1982, the San Francisco City Planning Commission passed Resolution No. 9403, whieh imposed two-year interim controls on the Rineon Hill Plan area, restrieting all new development to comply with the RC-2 (Residential-Commereial Combined, Moderate Density) zoning district. These controls expired on May 27, 1984. On July 26, 1984, the City Planning Commission adopted Resolution No. 10069, which established new one-year interim controls restricting development in the proposed Residential Districts (Midrise and Highrise) of the Rincon Hill Plan to comply with the RC-3 (Residential-Commercial Combined, Medium Density) zoning district. The Commercial/Industrial district of the Rincon Hill Plan, which includes the Phase I offiee site, was exempt from these interim controls. The permanent controls, signed by the Mayor on Deeember 4, 1985, effective January 6, 1986 (CPC Resolution No. 10468), replaeed the more restrictive RC-3 zoning with RC-4 (High Density).

The Phase I offiee site is zoned M-1, Light Industrial. Professional and business offices are permitted as prineipal uses. The basic Floor Area Ratio (FAR) in an M-1 distriet is 5.0:1, meaning that the total gross floor area may be five times the area of the site. The Phase I site is in a 200-R Height and Bulk district which allows a maximum building height of 200 feet. Between 51 and 105 feet the maximum allowable building length and diagonal dimension is 200 feet. Above 105 feet the maximum length allowed is 110 feet and the maximum diagonal dimension is 125 feet. Floor area limits also apply within the 51-105 foot and over 105-foot ranges.

*Derived from State EIR Guidelines, Appendix G, normally signifieant effeet.

The Phase II residential site is subject to RC-4 zoning, as noted above, and is in a 150-R Height and Bulk district. Floor area ratios and density limitations do not apply. A maximum building height of 150 feet is allowed. Bulk requirements in an "R" bulk district are explained above. Section 270(c)(4) stipulates a 150-foot distance between structures in height districts above 105 feet.

The project would be consistent with the Rincon Hill Plan (with allowable exception noted below) and the zoning for the site, and thus would meet this requirement for a tiered EIR. The project would require an exception to Section 270(c)(4) of the Planning Code regarding separation of towers. Such an exception is allowable pursuant to Section 303 of the Code.

The project's relationship to the Rincon Hill Plan, Planning Code and Master Plan will be discussed in the EIR.

The project would not conflict with adopted environmental plans or goals.

B. ENVIRONMENTAL EFFECTS - Could the project:

	Yes	No	Discussed
1. Land Use			
*a. Disrupt or divide the physical arrangement of an established community?	___	X	___
b. Have any substantial impact upon the existing character of the vicinity?	X	___	X

Existing land uses in the project vicinity (within 1-3 blocks) are primarily light industrial, office/commercial and surface parking lots. Land uses on the project block include parking, manufacturing, commercial/office uses and the Apostleship of the Sea, a temporary room and board facility for sailors. The nearest permanent residential uses are two blocks to the west of the project site on Guy Place. Rincon Hill is encircled by the Bay Bridge and the Embarcadero Freeway. There is an on-ramp to the Embarcadero Freeway at Folsom and Beale and elevated portions of the freeway run parallel to Folsom Street across the street from the project site. Parking lots are located under many of the freeway elevations; parking is a major land use in this area.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

Both phases of the project would continue the recent trend of diversification of land uses from light industrial to residential, office and retail. A land use change resulting from Phase I would be the conversion of vacant office/warehouse space to office. Phase II would introduce residential, retail and open space uses. Land use impacts upon the existing character of the vicinity will be discussed in the EIR.

2. Visual Quality	Yes	No	Discussed
*a. Have a substantial, demonstrable negative aesthetic effect?	___	X	X
b. Substantially degrade or obstruct any scenic view or vista now observed from public areas?	X	___	X
c. Generate obtrusive light or glare substantially impacting other properties?	___	X	X

The Rincon Hill area is generally dominated by lowrise industrial buildings that range from two to six floors. The Union 76 tower, Sailor's Union of the Pacific and the Hills Brothers tower and painted wall sign are notable exceptions. The multiple levels of the freeway ramps and the approach to the Bay Bridge encircling Rincon Hill make it a visually distinctive district from a bird's eye view although existing structures are generally not visible beyond the immediate vicinity. Views from the project site include Financial District highrises, the Bay Bridge, Treasure Island and parts of the East Bay and intervening buildings and freeway ramps. The proposed project would affect views to and from the City and this will be discussed in the EIR.

The proposed Phase I office project would convert the vacant Coffin-Reddington building to office use. Rehabilitation would improve the appearance of the building which is currently boarded-up and in need of paint. Sidewalks and pedestrian walkways and plazas, landscaping and street trees and lighting would be installed in and around the site which would contribute to a positive aesthetic effect.

The project would not use mirrored, reflective or densely tinted glass and would not generate obtrusive light or glare.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

	Yes	No	Discussed
3. Population			
*a. Induce substantial growth or concentration of population?	X	___	X
*b. Displace a large number of people (involving either housing or employment)?	___	X	X
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	___	X	X

The Phase I office project would generate about 467 employees (one per 275 square feet of office space). At full buildout, the Phase II residential/parking/retail portion would be expected to house from 200-400 residents (200 units, 1-3 person household), and produce retail/parking jobs for approximately 33 people (retail: one per 350 square feet; parking: one per 5,100 square feet). Because the site is currently vacant, no people would be displaced and no residences would be demolished. Project-specific employment information regarding number and type of employees on site will be discussed in the EIR.

The project would generate a demand for 50 dwelling units according to the Office Affordable Housing Production Program formula. The project must comply with the OAHPP, Ordinance No. 358-85. Cumulative and indirect effects including those of this project are addressed, and may be found in the Rincon Hill Plan EIR. That analysis will not be repeated in the 300 Beale Street EIR.

The Rincon Hill Plan EIR concluded that population effects resulting from development in the Rincon Hill Area under the Rincon Hill Plan would not be significant. The analysis and conclusions of the Rincon Hill Plan EIR remain current regarding future and project conditions. The Rincon Hill Plan EIR (82.39E, Final EIR certified July 18, 1985) may be examined at the Department of City Planning, 450 McAllister Street, 6th Floor; the San Francisco Main Library and various branch libraries.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

4. Transportation/Circulation

	Yes	No	Discussed
*a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	___	X**	X
b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	___	X**	X
c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	___	X**	___
d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	___	X	X

**The site-specific impacts created by this project are not expected to be significant, as noted in the discussion below. However, the localized effects of the project will be discussed in the EIR.

Increased employment and added residential traffic at the site would increase demand on existing transportation systems, including effects on the existing traffic load and capacity of the street system. The number of pedestrians in the area would also increase. The project would not cause alterations to existing circulation patterns. A 121-space surface parking lot would be replaced by a 329-space parking garage that would serve residents, employees and others. Project-related transportation impacts will be discussed in the EIR.

The cumulative transportation effects of development in the Rincon Hill Plan area and C-3 districts including the project, are analyzed in the Rincon Hill Plan EIR. The Planning Commission in certifying the Rincon Hill Plan EIR determined that cumulative transportation impacts would have a significant impact if not mitigated. The cumulative analysis in the Rincon Hill Plan EIR regarding transportation will be incorporated by reference into the 300 Beale Street EIR, and the project effects in relation to cumulative impacts will be discussed. The analysis in the Rincon Hill Plan EIR remains current regarding future and project conditions.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

5. Noise

	Yes	No	Discussed
*a. Increase substantially the ambient noise levels for adjoining areas?	___	X	X
b. Violate Title 25 Noise Insulation Standards if applicable?	___	X	X
c. Be substantially impacted by existing noise levels?	___	X	X

A report on noise has been prepared for 300 Beale Street by an independent consultant and is available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, San Francisco. The results of the analysis are summarized below.

The project site is exposed to noise emanating from surface streets (primarily Harrison Street and to a lesser extent, from Beale Street and Folsom Street) and two elevated freeways, the I-80 Bay Bridge approach and State Highway 480, The Embarcadero Freeway. A series of noise measurements were made to determine the variation in noise level across the site both horizontally and vertically. Noise measurements were made along Beale Street to determine the noise exposure outside of the proposed residential units and offices facing Beale Street at street level. A noise measurement was made on Harrison Street to determine the noise exposure of the proposed residential units at grade with Harrison Street and a noise measurement was made on the sixth floor of the Apostleship of the Sea building at Harrison and Fremont to determine the noise exposure of the upper floors of the residential tower that would be exposed primarily to noise emanating from the elevated freeways. The noise level outside of the tower located adjacent to Harrison Street would be dominated by Harrison Street traffic noise for those units very close to Harrison Street and by Bay Bridge traffic noise for the upper floors. Noise levels outside of the north facade of the northerly tower would be dominated by noise emanating from the Embarcadero skyway. Noise levels outside of the lower floors facing Beale Street side would be dominated by Beale Street traffic noise. The west facades of the towers and of the office building would be dominated by noise emanating from both the Embarcadero skyway and the Bay Bridge. The existing noise level at the location of the proposed residential towers and the office building varies from an L_{dn} of 65 to 70 dB.[1,2]

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

Phase I project construction would take place over about 9 months (Phase II, 24 months), and would increase noise levels in surrounding areas. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener. Phase II of proposed project would require the driving of piles. Construction noise impacts of the proposed project will be discussed in the EIR.

Project Operation

Project operation would not result in noise levels greater than those presently existing in the area. The amount of traffic generated by the project during any hour of the day, and cumulative traffic increases at the time of project completion, would cause traffic noise levels to increase by one dBA or less. To produce a noticeable increase in environmental noise, a doubling of existing traffic volume would be required; traffic increases of this magnitude would not occur with anticipated cumulative development including the project.[3]

The project would be required to comply with the San Francisco Noise Ordinance, San Francisco Police Code Section 2909, "Fixed Source Noise Levels," which regulate mechanical equipment noise. The project site and surrounding area are zoned M-1. In this district, the Ordinance limits equipment noise levels at the property line to 60 dBA between 7 a.m. and 10 p.m. and 55 dBA between 10 p.m. and 7 a.m. During lulls in traffic, mechanical equipment generating 70 dBA could dominate the noise environment at the site. The project engineer and architect would include design features in the building to limit mechanical equipment noise levels to below **60** dBA.

The Environmental Protection Element of the Comprehensive Plan contains guidelines for determining the compatibility of land uses with various noise environments. For noise levels of 70 dBA and above, the guidelines recommend that new office construction be undertaken only after a detailed noise analysis, and that new residential land uses exposed to a noise level between an L_{dn} of 65 and 70 dB should generally be discouraged. Residential construction should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

The Phase II residential towers would be subject to Title 25 of the California Administrative Code, which provides standards for maximum interior noise levels in residential units located in areas with an ambient noise level of 60 dBA or more. The State has determined that any multi-family residential project located where the exterior L_{dn} exceeds 60 dB must be designed such that the interior noise level does not exceed an L_{dn} of 45 dB. Title 25 Noise Insulation Standards would ensure that indoor noise levels would be low enough to safeguard the health of residents.

The Standard further requires that where projects are located in a noise environment in excess of an L_{dn} of 60 dB, an acoustical analysis shall be provided by a competent acoustical engineer showing how the interior standards will be met. The project sponsor would supply an acoustical analysis to the City showing how the State required interior noise level of an L_{dn} of 45 dB would be provided in the residential towers. The proposed project would comply with applicable City and state noise standards. Recommended noise insulation features would be included in the design of the proposed project as necessary to reduce noise levels. Mechanical ventilation would be required if the windows had to remain closed because of excessive noise levels. Operational noise will not be discussed in the EIR.

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[1] Noise measurements were taken in March 1985 for a continuous 24-hour period by Charles M. Salter Associates. Measurement locations were made on Beale Street, Harrison Street and on the sixth floor of the Apostleship of the Sea on Harrison and Fremont Streets.

[2]

L_{dn}:	An average sound level measurement, based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the greater annoyance of nighttime noises. Noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.
Decibel (db)	A logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert a force known as sound pressure level (commonly called "sound level") measured in decibels.
dBA	Decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels.

[3] See Downtown Plan EIR, Section IV.E generally and Section IV.J., pages IV.J.8-18. Increases of 1 dBA or less in environmental noise are not noticeable by most people outside a laboratory situation (National Academy of Sciences, Highway Research Board,

Rsch Report No. 117, 1971). (See FHWA Highway Traffic Noise Prediction Model, Rpt #FHWA-RD-77-108, December 1978, page 8, regarding doubling of traffic volumes producing increase of 3 dBA or more, which are noticed by most people.)

	Yes	No	Discussed
6. Air Quality/Climate			
*a. Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	X	___	X
*b. Expose sensitive receptors to substantial pollutant concentrations?	___	X	___
c. Permeate its vicinity with objectionable odors?	___	X	___
d. Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?	X	___	X

Construction activities would temporarily affect local air quality. Excavation, grading and construction activities would affect local air quality, especially total suspended particulates (TSP). An effective watering program (complete coverage twice daily) can reduce dust generation by about 50%. For the Phase II project the project sponsor would require the contractor to implement a program to water the site at least twice a day, which would reduce airborne construction dust and particulates by about 50% and reduce the likelihood of exceeding the state and federal standards (see Mitigation Measure No. 2, page 26).

Diesel-powered equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of exceedances of air quality standards. The project sponsor would require the project contractor to maintain and operate construction equipment in such a way as to minimize exhaust emissions (see Mitigation Measure No. 2, page 26). Construction air quality effects require no further analysis.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

The cumulative effects on air quality of traffic emissions from traffic generated by development under the Rincon Hill Plan including the project are analyzed in the Rincon Hill Plan EIR. The Planning Commission in certifying the Rincon Hill Plan EIR determined that cumulative air quality impacts would have a significant impact. The cumulative analysis in the Rincon Hill Plan EIR regarding air quality wil be incorporated by reference and the project effect in relation to cumulative effects will be discussed. The analysis and conclusions of the Rincon Hill Plan EIR remain current regarding future and project conditions.

Section 249.1(b)(3) of the Planning Code establishes comfort criteria of 11 m.p.h. equivalent wind speed for pedestrian areas and 7 m.p.h. for seating areas, not to be exceeded more than 10% of the time, year-round between 7:00 a.m. and 6 p.m. In order to determine the wind effects of the project and its compliance with the Rincon Hill Plan, wind tunnel tests were performed.[1] The analysis of project wind effects will be summarized in the EIR.

Shadow impacts of the proposed project will be discussed in the EIR.

[1]The wind tunnel analysis was prepared by Don Ballanti, Consulting Meteorologist for EIP Associates, and is on file and available for public review at the Office of Environmental Review, 450 McAllister Street, 6th Floor.

	Yes	No	Discussed
7. Utilities/Public Services			
*a. Breach published national, state or local standards relating to solid waste or litter control?	___	X	X
*b. Extend a sewer trunk line with capacity to serve new development?	___	X	X
c. Substantially increase demand for schools, recreation or other public facilities?	___	X	X
d. Require major expansion of power, water, or communications facilities?	___	X	X

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

The proposed project would increase demand for and use of public services and utilities on the site, but not in excess of amounts expected and provided for in the project area. The providers of utilities and public services have been contacted and have responded that they have adequate capacity to serve the project and would not require additional personnel or equipment. Letters from these service providers are available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, 6th Floor.

The Rincon Hill Plan EIR concluded that demand for utilities and public services resulting from development in the subject area under the Rincon Hill Plan would not be significant. The Rincon Hill Plan EIR (82.39E, Final EIR certified July 18, 1985) may be examined at the Department of City Planning, 450 McAllister St., 6th Floor; the San Francisco Main Library and various branch libraries.

No further discussion of utilities/public services is necessary.

8. Biology	Yes	No	Discussed
*a. Substantially affect a rare or endangered species of animal or plant, or the habitat of the species?	___	X	X
*b. Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	___	X	___
c. Require removal of substantial numbers of mature, scenic trees?	___	X	X

The majority of the project site is covered by pavement for parking and by an existing building. There are no rare or endangered species of plant or animal habitats on site. Two small trees located in the extreme southwestern corner of the site would be removed. The proposed project would include street trees planted along Folsom and Beale Streets and throughout the open space portion of the site. Biology will not be discussed in the EIR.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

9. Geology/Topography	Yes	No	Discussed
*a. Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)?	___	X	X
b. Change substantially the topography or any unique geologic or physical features of the site?	___	X	X

The site abuts an existing overpass structure (Harrison Street) and backs against a steep slope to the southwest. From the toe of this slope the rest of the site slopes from +12 ft., San Francisco City Datum (SFD) to about +6 ft. along the south-north direction.[1] Soils at the site are composed of relatively uniform, dense, clayey sand overlying bedrock.[2] Groundwater levels were encountered at about 22 feet, 15 feet, and 6 inches.[3] The latter is believed to be a localized perched water table.

Excavation for the project foundation and parking garage would be conducted to a depth of about 16 feet. A spread footing foundation is recommended in the area of the site where bedrock is exposed or shallow from basement construction. Phase II of the project would require some piledriving where bedrock is deep.

If dewatering were necessary, any groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the storm drain/sewer lines. Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor the level of the water table and other instruments would be used to monitor potential

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service under the street would be borne by the project sponsor.

A California-licensed structural engineer and a geotechnical consultant have been retained for the project. The project sponsor would follow the engineer's recommendations during the final design and construction of the project.

Pit walls would be shored up to prevent lateral movement during excavation. Adjacent structures might need to be underpinned, should excavation go below the base of their foundations, to avoid such damage as cracking of walls or foundations or sagging of floors. The building contractor must comply with the San Francisco Building Code and the Excavation Standards of the California Occupational Safety and Health Agency.

The closest active faults to San Francisco are the San Andreas Fault, about 9 miles southwest of Downtown, and the Hayward and Calaveras Faults, about 15 and 30 miles east of Downtown, respectively. The project area would experience strong (Intensity Level D, general but not universal fall of brick chimneys, cracks in masonry and brick work) groundshaking during a major earthquake.[4] The project would rehabilitate a building on the site built prior to current seismic code standards, and therefore generally more susceptible to earthquake damage. Both the rehabilitation and the new construction would be required to meet current seismic engineering standards of the San Francisco Building Code.

Geology/topography will not be discussed in the EIR.

[1]San Francisco City Datum establishes the City's "0" point for surveying purposes at approximately 8.6 feet above mean sea level.

[2]Geo-Resource Consultants, Preliminary Foundation Investigation, 330 Beale Street, April 4, 1985.

J. Schlocker, Geology of San Francisco North Quadrangle, California, U.S. Geological Survey Professional Paper 782, U.S. Government Printing Office, Washington, D.C., 1974, plate 1 (scale 1:24,000).

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

[3]Geo-Resource Consultants, op. cit.

[4]URS/John A. Blume and Associates, San Francisco Seismic Safety Investigation, 1974. Groundshaking intensities that would result from a major earthquake were projected and classified on a five-point scale ranging from E (Weak) through A (Very Violent).

	Yes	No	Discussed
10. Water			
*a. Substantially degrade water quality, or contaminate a public water supply?	___	X	___
*b. Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	___	X	___
*c. Cause substantial flooding, erosion or siltation?	___	X	X

There is no surface water at the site. The site is covered by a paved parking lot and an existing building. Runoff would continue to drain into the combined City storm/sewer system. Measures to reduce potential impacts due to dewatering which might be required by the Department of Public Works, have been included in the proposed project (see Geology/Topography above). Water issues will not be discussed in the EIR.

11. Energy/Natural Resources			
*a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	___	X	X
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	___	X	X

Projections of electrical use for growth that would occur under the Downtown Plan EIR indicate an increase of about 330-350 million kWh per year between 1984 and 2000, as a result of all new development occurring in the C-3 district. Natural gas consumption is expected to increase by 470 million cubic feet (about five million therms) per year during the same time period, of which 210 cubic feet (about two million therms) per year would be for office uses. The project would consume about 3.0 million kWh and about 208,000 therms per year. The project's energy consumption would be in addition to C-3 totals.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

Increased San Francisco energy demands to the year 2000 would be met by PG&E from nuclear sources, oil and gas facilities, hydroelectric and geothermal facilities, and other sources such as cogeneration wind and imports. PG&E plans to continue receiving most of its natural gas from Canada and Texas under long-term contracts.

The proposed project would not encourage activities that would result in the wasteful use of energy or have a substantial effect on natural resources. Operational and transportation-related energy use will however, be discussed in the EIR.

12. Hazards	Yes	No	Discussed
*a. Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	___	X	___
*b. Interfere with emergency response plans or emergency evacuation plans?	___	X	X
c. Create a potentially substantial fire hazard?	___	X	X

The project would not create a potential public health hazard through the production or disposal of harmful materials. The proposed project would comply with current fire and building code standards. In order to ensure that the project would not interfere with any emergency response or emergency evacuation plans of the City, the project sponsor has included a mitigation measure (see Mitigation Measure No. 3, page 26) as part of the project.

Hazards require no further discussion in the EIR.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

13. Cultural

	Yes	No	Discussed
*a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community, ethnic or social group; or a paleontological site except as a part of a scientific study?	___	X	X
b. Conflict with established recreational, educational, religious or scientific uses of the area?	___	X	___
c. Conflict with the preservation of buildings subject to the provisions of Article 10 or (proposed) Article 11 of the City Planning Code?	___	X	X

The excavation required for foundations and garage would occur in existing disturbed soils so there would be limited potential for encountering cultural resources during construction. No prehistoric archaeological sites have been recorded within the area, although within two miles a shell mound was discovered in 1929 and a human burial disinterred in 1970.[1] The project sponsor has included a mitigation measure as part of the project which addresses the potential for encountering cultural or historic resources (see Mitigation Measure No. 4, page 27).

The Coffin-Reddington building was erected in 1937. It is earmarked for preservation by the Rincon Hill Plan and would be retained. Cultural resources will not be discussed in the EIR.

---

[1] San Francisco Department of City Planning, The Rincon Hill Plan EIR, 82.39E, June 22, 1984.

C. OTHER

Require approval of permits from City Departments other than Department of City Planning or Bureau of Building Inspection or from Regional, State or Federal Agencies?	___	X	___

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

D. MITIGATION MEASURES	Yes	No	N/A	Discussed
1. If any significant effects have been identified, are there ways to mitigate them?	X	___	___	X
2. Are all mitigation measures identified above included in the project?	X	___	___	X

MITIGATION MEASURES INCLUDED AS PART OF THE PROJECT:

1. In order to reduce obtrusive light or glare, the project sponsor would use no mirrored glass on the building.

2. The project sponsor would reuqire the general contractor to sprinkle demolition sites with water continually during demolitoin activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50%; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soil, sand, or other such material; and sweep streets surrounding demolition and construction sites at least once a day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as a prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintanence programs (to reduce emissions) for equipment that would be in frequent use for much of a construction period.

3. An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to ensure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance by the Department of Public Works of final building permits.

4. Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer (ERO) and the President of the Landmarks Preservation Advisory Board would be notified immediately, and any excavation which could damage such artifacts halted. The project sponsor would select an archaeologist or other expert to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The ERO would then recommend specific mitigation measures, if necessary.

   Copies of reports prepared according to this mitigation measure would be sent to the California Archaeological Site Survey Office at Sonoma State University. Excavation or construction that might damage the discovered cultural resources would be suspended for a maximum of four weeks (cumulatively for all instances that the ERO has required a delay in excavation or for construction) to permit inspection, recommendation and retrieval, if appropriate.

Additional mitigation measures for the project will be discussed if need is identified.

E. MANDATORY FINDINGS OF SIGNIFICANCE	Yes	No	Discussed
*1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history?	___	X	___
*2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	X	___
*3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	X	___	X

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

	Yes	No	Discussed
*4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	___	X	___
*5. Is there a serious public controversy concerning the possible environmental effect of the project?	___	X	___

The project would contribute to cumulative effects in the areas of transportation and air quality. The EIR will incorporate by reference the analyses for air quality and transportation contained in the Rincon Plan EIR. Those analyses remain current for future and project conditions.

F. DETERMINATION THAT A TIERED EIR IS REQUIRED

In light of the discussion in this Initial Study a tiered EIR is required for this project pursuant to the requirements of Public Resources Code Section 21094(b) as follows:

1. The project would be consistent with the Rincon Hill Plan, policies and ordinances for which a Final EIR (82.39E) was certified July 18, 1985;

2. The project would be consistent with applicable local land use plans and zoning pursuant to the Rincon Hill Plan and Planning Code, with allowable exceptions; and,

3. Section 21166 does not apply.

G. ON THE BASIS OF THIS INITIAL STUDY:

___ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

___ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers __, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

X I find that the proposed project MAY have a significant effect on the environment, and a tiered ENVIRONMENTAL IMPACT REPORT is required.

for BARBARA W. SAHM
Environmental Review Officer

for

Dean L. Macris
Director of Planning

Date: Feb. 11, 1986

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

INITIAL STUDY

DISTRIBUTION LIST

STATE AND FEDERAL AGENCIES

California Arch. Site Inventory
Regional Office

Calif. Dept. of Transportation
Public Trans. Branch

REGIONAL AGENCIES

Bay Area Air Quality Management
District

CITY AND COUNTY OF SAN FRANCISCO

Bureau of Bldg. Inspection

San Francisco City Attorney's Office

Landmarks Preservation Advisory Board

Economic Development Council

Public Utilities Commission

Public Utilities Commission
Energy Conservation

Recreation & Park Dept.

Bureau of Engineering - Streets and
Highways

Dept. of Public Works -
Mechanical Engineering Division

Department of Public Works
Traffic Engineering Division

San Francisco Fire Dept.

Municipal Railway
Planning Division

San Francisco Real Estate Dept.

San Francisco Water Department

MEDIA

San Francisco Bay Guardian

San Francisco Business Journal

San Francisco Chronicle

San Francisco Examiner

San Francisco Progress

The Sun Reporter

Tenderloin Times

LIBRARIES

San Francisco Public Library

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Hastings College of the Law Library

Inst. of Govt. Studies

San Francisco State University

Jonsson Library of Govt. Documents
Stanford University

GROUPS & INDIVIDUALS

Foundation for SF's Heritage

Sue Hestor

Rin Ten Ten Assn.

San Francisco Planning &
Urban Research Association

San Franciscans for
Reasonable Growth

San Francisco Forward

San Francisco Tomorrow

South of Market Alliance

Tenants and Owners Development
Corporation

Calvin Welch

ADJACENT PROPERTY OWNERS

345 Folsom St. Jt. Venture
c/o Wolf & Assoc.

Beatrice Foods Inc.
c/o Walker Engraving

Anderson Family Trust
c/o Gary & Charlotte Anderson

Joy Investment
c/o Joy-Tak Inc.

Roman Catholic Archbishop of
San Francisco

GSA, Real Property Disposal

Caltrans, Right-of-Way Div.

John Morosi/James R. Korich

Edwin Christie

Keil Sonoma Corp.

Manasco
c/o Richard Wall

PROJECT SPONSOR

Lincoln Property Co.
Bernard Yosten

PROJECT ARCHITECT

Whisler-Patri
Kent Turner

PROJECT ATTORNEY

Coblentz, Cahen, McCabe & Breyer
Pamela Duffy

APPENDIX B: WIND STUDY METHODOLOGY

This summary of wind study methodology is based on a study by EIP Associates entitled "Wind Tunnel Analysis for the Proposed 300 Beale Street ". This report is available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, Sixth Floor.

Introduction

Wind tunnel tests were conducted for wind on the project site in its current condition (and approved projects in the vicinity) and with the proposed project in relation to the Section 249.1 wind performance criteria.

Tests were performed on a 1 inch = 30 feet scale model of the project site and surrounding several blocks. All proposed, approved and under-construction buildings within the area modeled were included.

Tests were conducted in EIP Associates boundary layer wind tunnel in San Francisco. The tunnel has a cross-section seven-feet wide by five-feet high, and has a total length of 60 feet. Speeds within the tunnel can be varied from approximately 3 to 12 mph.

Visualization of the flow was performed by releasing flood-lit smoke near the model. Wind speeds were measured at 26 locations near and within the project site. Measurements were made with a hot-film probe and a constant temperature anemometer, an instrument that electronically relates heat loss from the probe to wind speed. Mean windspeeds and the turbulence intensity measured over the

model were related statistically to real-world winds by comparing measured winds to the free-stream wind above the model.

Methodology and Assumptions

Winds were tested for four wind directions: northwest, west-northwest, west and west-southwest. The wind direction was varied by rotating the model within the wind tunnel to simulate the desired wind direction.

The mean wind speeds at street level were determined by a wind tunnel test, and a comparison of the test results with statistically representative records of wind data collected atop the Old Federal Building. Data describing the speed, direction and frequency of occurrence of winds were gathered at the Old Federal Building, at 50 United Nations Plaza, during the six-year period 1945 to 1950. Hourly measurements have been tabulated for each month (averaged over the six years) in three-hour periods using seven classes of wind speed and 16 compass directions. Analysis of these data shows that during the hours from 6:00 a.m. to 8:00 p.m., about 62% of the winds blow from three of the 16 directions, as follows: northwest (NW), 10%; west-northwest (WNW),14%; west (W),35%; west-southwest (WSW), 2%; calm conditions occur 2% of the time.

Each wind tunnel test measurement results in a ratio that relates the speed of ground-level wind to the speed at the reference elevation, in this case the height of the old San Francisco Federal Building. The wind that is measured is an equivalent wind speed value which is adjusted to include the level of gustiness or turbulence present.

The frequency with which a particular wind velocity is exceeded at any test location is then calculated by using the measured wind tunnel ratios and a specified ground speed to determine the corresponding reference wind speed for each direction. In general, this gives different reference speeds for each direction (NW, WNW, W, WSW, and Other). The wind data for San Francisco are then used to calculate the percentage of the time each reference speed would be exceeded. The sum of these is the total percentage of the time that the specified ground-level wind speed would be exceeded. A computer is used to calculate the total percentages for a series of wind speeds until the speed corresponding to the speed exceed 10% of the time is found. Throughout the following discussion, the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time.

Study Results

The results of the wind tunnel analysis are presented in tabular form in Figure 1. The values presented are the estimated wind speeds that would be exceeded 10% of the time between the hours of 7:00 a.m. and 6:00 p.m. on an annual basis.

EQUIVALENT WIND SPEEDS AT PEDESTRIAN LEVEL

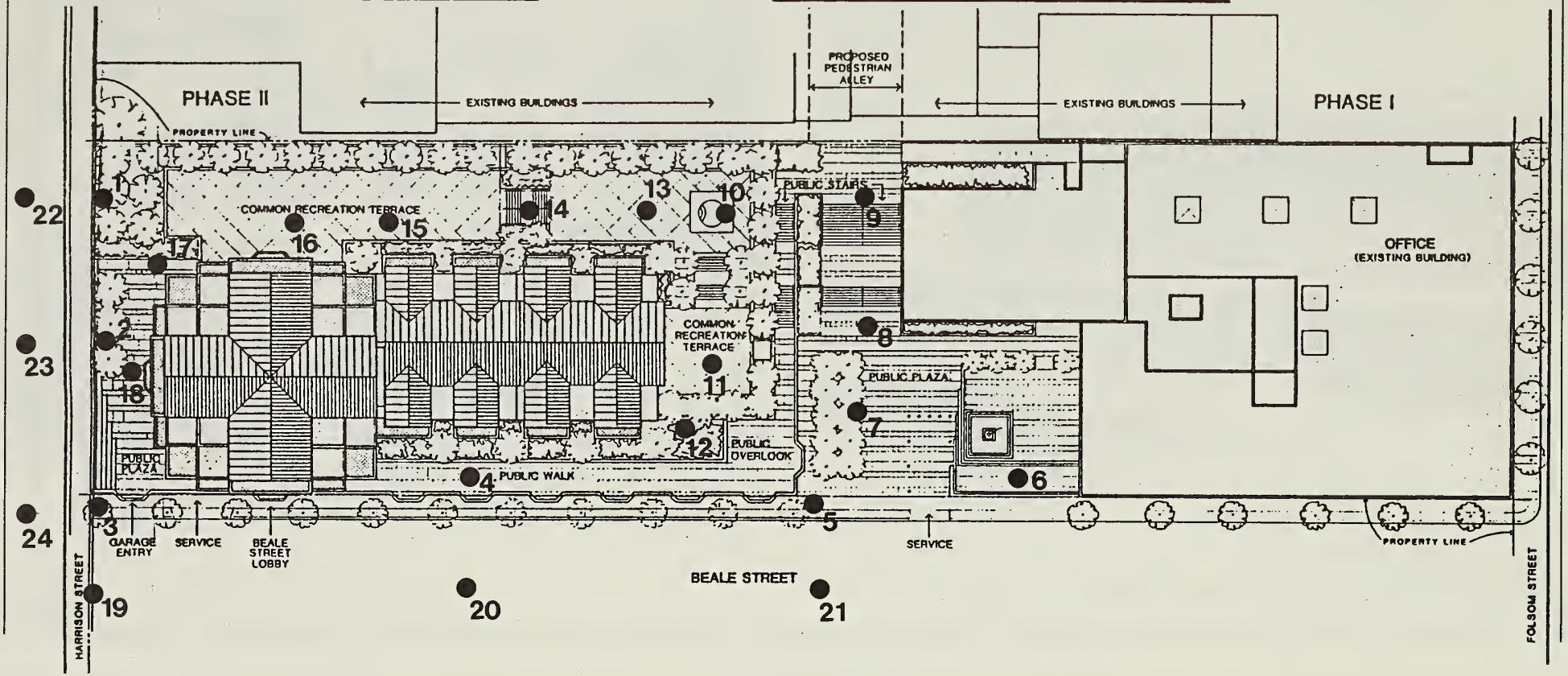
FIGURE 1

LOCATION	EXISTING	PROJECT
1	7	7
2	7	8
3	7	8
4	6	6
5	7	7
6	6	7
* 7	5	7
* 8	4	6
* 9	4	7
*10	-	6
*11	-	8
*12	-	8

LOCATION	EXISTING	PROJECT
*13	-	7
*14	-	6
*15	-	7
*16	-	6
17	-	8
18	-	9
19	6	6
20	7	6
21	8	5
22	7	9
23	6	9
24	8	9

SOURCE: DON BALLANTI

* Sitting Areas



85003

TABLE C-1: PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

Level of Service	Description	Passengers per Seat
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with less than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00-0.50
B	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51-0.75
C	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76-1.00
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence as the restricted freedom of movement for passengers requires longer loading times.	1.01-1.25
E	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur which can rapidly cause operations to deteriorate.	1.26-1.50
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability is extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51 1.60

SOURCE: Environmental Science Associates, Inc. from information in the Interim Materials on Highway Capacity, Transportation Research Circular 212, pp. 73-113, Transportation Research Board, 1980.

M OCEAN VIEW - CIVIC CENTER STATION
Wednesday, September 9, 1981 - 8:20 A.M. - Inbound

L TARAVAL - VAN NESS STATION
Wednesday, September 16, 1981 - 4:50 P.M. - Outbound

14 MISSION - MISSION STREET AND SOUTH VAN NESS AVE.
Tuesday, September 29, 1981 - 5:45 P.M. - Outbound

N JUDAH - DUBOCE AND CHURCH
Wednesday, June 8, 1983 - 8:00 A.M. - Inbound

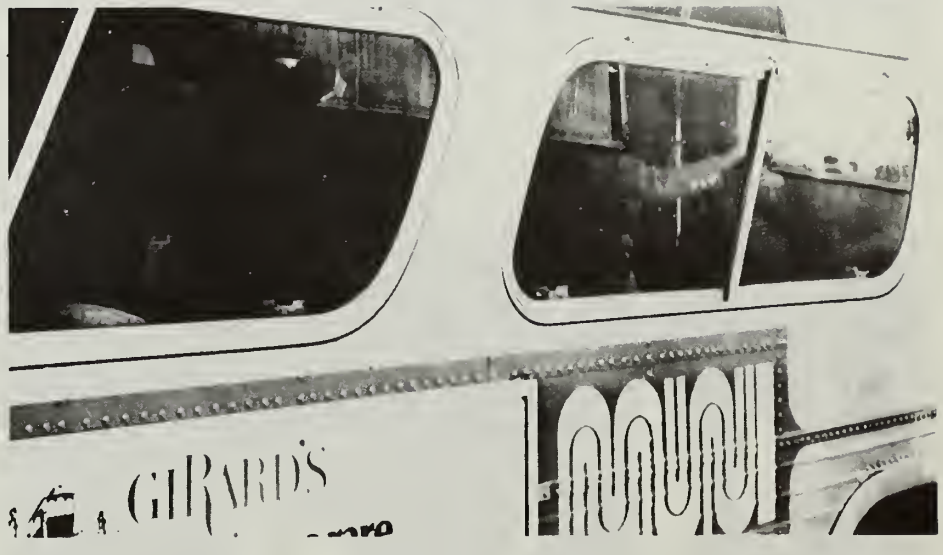
FIGURE C-1
PHOTOS OF MUNI PEAK LOADING CONDITIONS

SOURCE: ESA

K INGLESIDE - VAN NESS STATION
Wednesday, September 9, 1981 - 8:00 A.M. - Inbound

N JUDAH - VAN NESS STATION
Wednesday, September 16, 1981 - 5:00 P.M.-Outbound

38 GEARY - VAN NESS AVE. AND O'FARRELL ST.
Wednesday, October 21, 1981 - 9:00 A.M. - Inbound



38 GEARY - VAN NESS AVE. AND GEARY BLVD.
Wednesday, October 21, 1981 - 4:20 P.M. - Outbound

FIGURE C-1 (CONTINUED)
PHOTOS OF MUNI PEAK LOADING CONDITIONS

SOURCE: ESA

30X MARINA EXPRESS - BAYSHORE AVE. AND ARIETA AVE.
Wednesday, October 7, 1981 - 8:00 A.M. - Inbound

J CHURCH - CHURCH ST. AND DUBOCE AVE.
Tuesday, September 29, 1981 - 9:00 A.M. - Inbound

SOURCE: ESA

FIGURE C-1 (CONTINUED)
PHOTOS OF MUNI PEAK LOADING CONDITIONS

PEDESTRIAN ANALYSIS

The pedestrian analysis has been conducted following methods developed by Pushkarev and Zupan in Urban Space for Pedestrians (MIT Press, 1975). Table C-2 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation. Figure C-2 shows photographs of pedestrian conditions that correspond to the flow regimes.

TABLE C-2: PEDESTRIAN FLOW REGIMEN

FLOW REGIME/a/	CHOICE	CONFLICTS	FLOW RATE (p/f/m)/b/
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
	Design Limit - Upper Limit of Desirable Flow		
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable/c/

/a/ Photographs of these conditions are shown in Figure C-2.
/b/ P/F/M = Pedestrians per foot of effective sidewalk width per minute.
/c/ For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: Urban Space for Pedestrians, MIT Press, 1975, Cambridge, MA.

The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m^2) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.

The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture have almost 130 sq ft (12 m^2) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m^2). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.

The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m^2) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.

Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m^2) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

FIGURE C-2
PHOTOS OF PEDESTRIAN FLOW LEVELS

SOURCE: Pushkarev and Zupan

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m^2). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely uncomfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.

The threshold of CONGESTED FLOW. The first eleven people in the view have about 16 sq ft (1.5 m^2) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.

The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m^2) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.

The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m^2) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

FIGURE C-2 (CONTINUED):
PHOTOS OF PEDESTRIAN FLOW LEVELS

SOURCE: Pushkarev and Zupan

INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table C-3). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E.

TABLE C-3: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

/a/ Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering from Highway Capacity Manual, Highway Research Board, 1965

DKS Associates

Oakland, California

SUBJECT 300 BEALE JOB NO

SHEET NO OF

MADE BY CB DATE 4/4/85 CHECKED BY DATE

SAN FRANCISCO

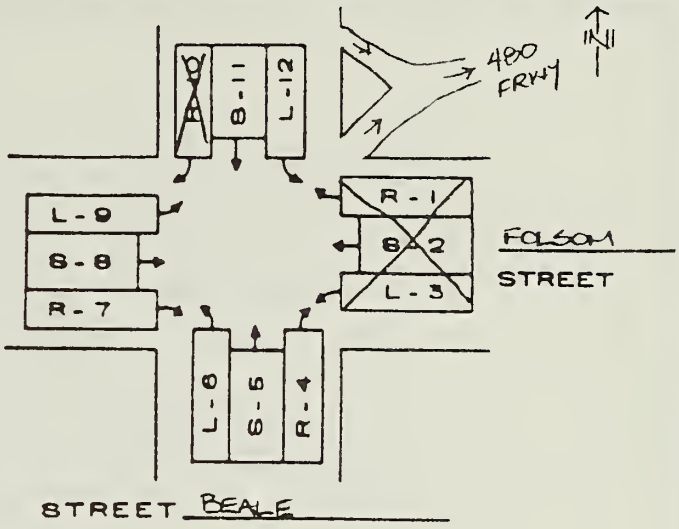
LOCATION FOLSOM

BEALE

WEATHER

TIME 4:30 PM

TO 5:30 PM



THURSDAY 4 APRIL 85 TRAFFIC COUNT

MOVEMENT / TIME	WROH R-4	WAY S-5 FWY		R-7	S-8	L-9 TO FRWY		S-11	L-12	L-12 TO FRWY		
15 M												
30												
4 45 PM	4	0		24	133	115		83	9	13		
5 00	2	1		45	106	126		113	11	22		
5 15	0	1		65	119	116		131	16	35		
5 30	3	2		29	96	158		90	5	28		
PEAK HOUR 4:30-5:30	9	4		163	454	515		417	41	98		
30												
45												
00												
15												
30												
45												
00												
15												
30												
45												
00												

DKS Associates

Oakland, California

SUBJECT 300 BEALE JOB NO

SHEET NO OF

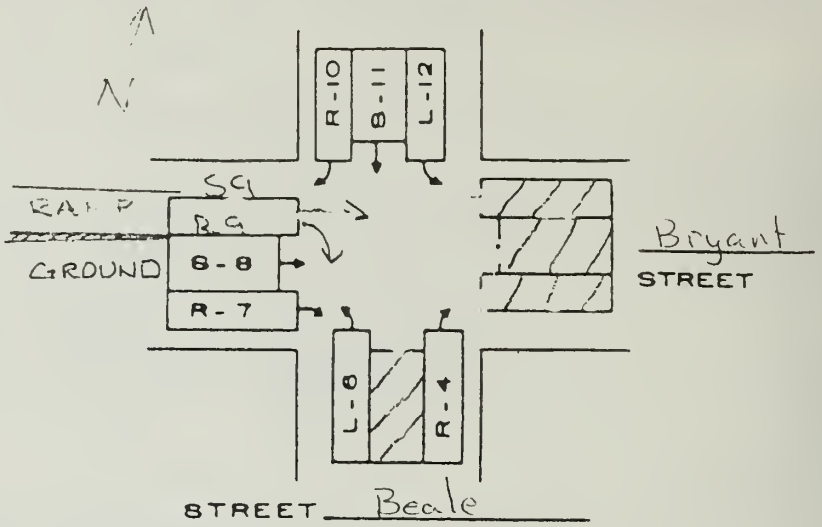
MADE BY AS DATE 4/4/85 CHECKED BY DATE

LOCATION Beale
Bryant

WEATHER Sunny

TIME 4:30 PM

TO 5:30 PM



THURSDAY 4 APRIL 85 TRAFFIC COUNT

MOVEMENT / TIME	R4	ALL CARPOOL L6	GROUND R7	S8	RAMP R9	S9	ALL CARPOOL R10	S11	L12		totals	Wierzbicki
15 M												
30												
4 45 PM	17	8	4	28	10	57	39	96	44		303	2
5 00	20	3	5	31	5	42	83	103	32		324	1
5 15	15	2	6	26	12	57	84	135	44		381	0
5 30	21	5	5	13	8	36	48	96	20		252	3
PEAK HOUR	73	18	20	98	35	192	254	430	140		1260	
30												
45												
00												
15												
30												
45												
00												
15												
30												
45												
00												

KS Associates

nd, California

SUBJECT 300 BEALE JOB NO

SHEET NO OF

MADE BY Jarrod DATE 4/4/85 CHECKED BY DATE

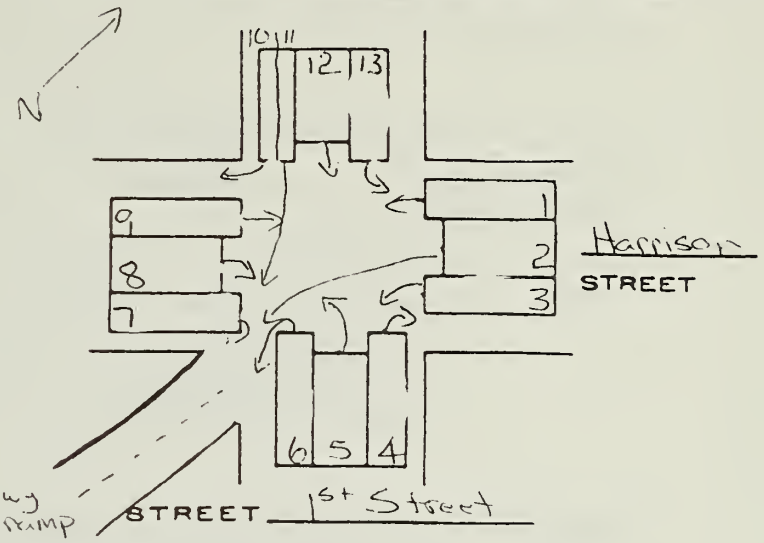
SAN FRANCISCO

LOCATION Harrison
1st Street

WEATHER Sunny

TIME 3:30 PM

TO 6:30 PM

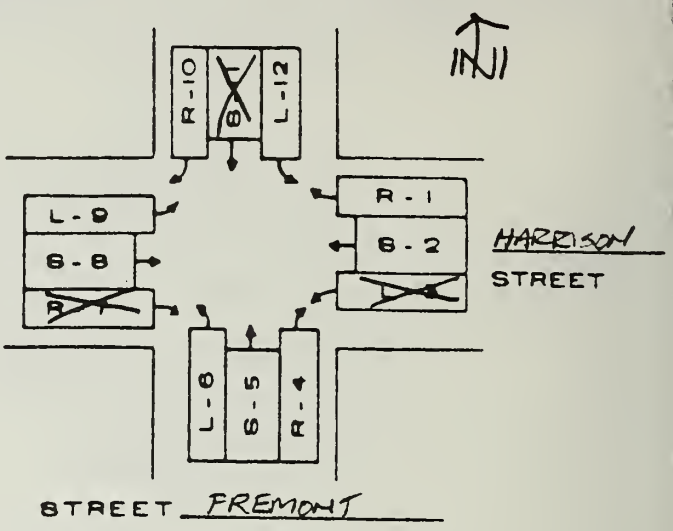


THURSDAY 4 APRIL 85 TRAFFIC COUNT

MOVEMENT / TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	
3 45 PM	165	139	0	8	6	10	4	2	16	93	145	6	10	604
4 00	119	115	2	2	1	1	2	6	13	74	139	3	15	491
4 15	125	124	2	2	15	6	5	1	14	97	174	0	7	577
4 30	68	76	0	4	7	0	3	2	9	52	96	1	5	323
4 45	98	65	1	7	2	1	0	1	13	104	102	6	17	417
5 00	46	78	0	1	2	4	2	1	3	105	88	3	16	349
5 15	46	111	0	2	1	4	2	1	4	85	96	4	6	364
5 30	39	111	1	0	1	2	6	1	5	105	90	1	5	367
5 45	44	126	0	2	0	2	2	1	6	86	103	4	7	383
6 00	29	121	0	1	1	0	9	1	3	75	89	0	3	332
6 15	21	144	0	0	3	2	3	0	1	64	111	4	7	360
6 30	37	115	0	1	2	0	3	0	8	60	86	1	0	313
PEAK HOUR 3:30 - 4:30	477	454	4	16	29	17	14	11	52	316	554	10	37	
						46				3:30 4:30	total		1901	
PEAK 4:30 - 5:30	231	365	2	10	6	11	10	4	25	399	376	14	44	
15						17		4:30 5:30	total	1497				
30														
45														
00														

300 BEALE SHEET NO ..... OF .....
MADE BY EIP DATE 4/10/85 CHECKED BY ..... DATE .....

LOCATION HARRISON
FREMONT
WEATHER
TIME 4:30 PM
TO 5:30 PM



WEDNESDAY 10 APRIL 85 TRAFFIC COUNT

MOVEMENT / TIME	R-1	S-2		R-4	S-5	L-6		S-8	L-9	R-10	L-12	TOTAL
:15 M												
30												
4 45	13	152		37	22	20		14	18	18	0	294
5:00	17	118		48	36	20		10	20	19	2	290
5:15	17	108		70	25	24		7	10	39	2	302
5 30	11	109		37	26	17		10	5	30	1	246
PEAK HOUR	58	487		192	109	81		41	53	106	5	✓
30												
:45												
00												
:15												
:30												
45												
00												
15												
30												
45												
00												

TABLE C-4: TRAFFIC LEVELS OF SERVICE FOR FREEWAYS

Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.00-0.60
B	Level of Service B is in the higher speed range of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted.	0.61-0.70
C	Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the highervolumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained.	0.71-0.80
D	Level of Service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected. by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.	0.81-0.90
E	Level of Service E cannot be described by speed alone, but represents operations at even lower operating speeds (typically about 30 to 35 mph) than in Level D, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration.	0.91-1.00
F	Level of Service F describes forced flow operation at low speeds (less than 30 mph), in which the freeway acts as storage for queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volume can drop to zero.	1.00+

/a/ Capacity is defined as Level of Service E.

SOURCE: Environmental Science Associates, Inc. from information in the Highway Capacity Manual, Special Report 87, Highway Research Board, 1965.

APPENDIX D: SAN FRANCISCO AIR POLLUTANT SUMMARY, 1981-1984

STATION: 900 23rd Street, San Francisco

POLLUTANT:	STANDARD	1981	1982	1983	1984/i/
OZONE (O^3) (Oxidant)					
1-hour concentration, ppm/a/					
Highest hourly average 0.10 /b/	0.12 /c/	0.07	0.08	0.13	0.10
Number of excesses of state standard		0	0	1	1
Expected Annual Excess (federal)/d/		0.0	0.0	0.3	-
CARBON MONOXIDE (CO)					
1-hour concentration, ppm					
Highest hourly average	20 /b,e/	8	12	7	-
Number of excesses of standard		0	0	0	-
8-hour concentration, ppm					
Highest 8-hour average	9 /b,c/	5.3	9.1	5.1	10.8
Number of excesses of standard		0	1	0	1
TOTAL SUSPENDED PARTICULATE (TSP)					
24-hour concentration, ug/m^3/a/					
Highest 24-hour average	100 /b,f/	103	126	117	-
Number of excesses of standard/g/		1	3	4	-
Annual concentration, ug/m^3					
Annual Geometric Mean	60 /b,f/	56	57	55	60
Annual excess of standard		No	No	No	Yes
LEAD (Pb)					
30-day concentration, ug/m^3					
Highest 30-day average	1.5 /b/	0.6	0.7	0.4	-
Number of excesses of standard		0	0	0	-
NITROGEN DIOXIDE (NO_2)					
1-hour concentration, ppm					
Highest hourly average	0.25 /b/	0.11	0.13	0.13	0.14
Number of excesses of standard		0	0	0	0
SULFUR DIOXIDE (SO_2)					
24-hour concentration, ppm					
Highest 24-hour average	0.05 /b/	0.016	0.012	0.018	0.03
Number of excesses of standard/g,h/		0	0	0	0

/a/ ppm: parts per million. ug/m^3: micrograms per cubic meter.
/b/ State standard, not to be equaled or exceeded, except for CO standards, which are not to be exceeded.

(Continued)

APPENDIX D: SAN FRANCISCO AIR POLLUTANT SUMMARY 1981-1984 (Continued)

/c/ Federal standard, not to be exceeded more than once per year, except for annual standards, which are not to be exceeded.
/d/ Expected Annual Excess is a three-year average of annual excesses of the federal standard.
/e/ The state one-hour CO standard was revised from 35 ppm to 20 ppm in January 1983. The federal one-hour standard remains 35 ppm.
/f/ The California ARB has redefined the state particulate standard to apply to "inhalable" particulates only (i.e., those which have a diameter less than ten microns). The new standards are 50 ug/m^3 for 24-hour averages and 30 ug/m^3 for the annual geometric mean. No data is currently available on the particle size distribution of the TSP sampled at the San Francisco monitoring station.
/g/ Number of observed excess days (measurements taken once every six days).
/h/ Exceeding the SO_2 standard is a violation only if a concurrent excess of the state ozone or TSP standards occurs at the same station. Otherwise, the federal standard of 0.14 ppm applies.
/i/ 1981-1984 data collected at 900 23rd Street

SOURCE: BAAQMD, 1981 - 1983, Air Quality in the San Francisco Bay Area; and California ARB, 1981 - 1984, California Air Quality Data.

APPENDIX E

FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are:

a. the intensity or level of the sound

b. the frequency spectrum of the sound

c. the time-varying character of the sound

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing.

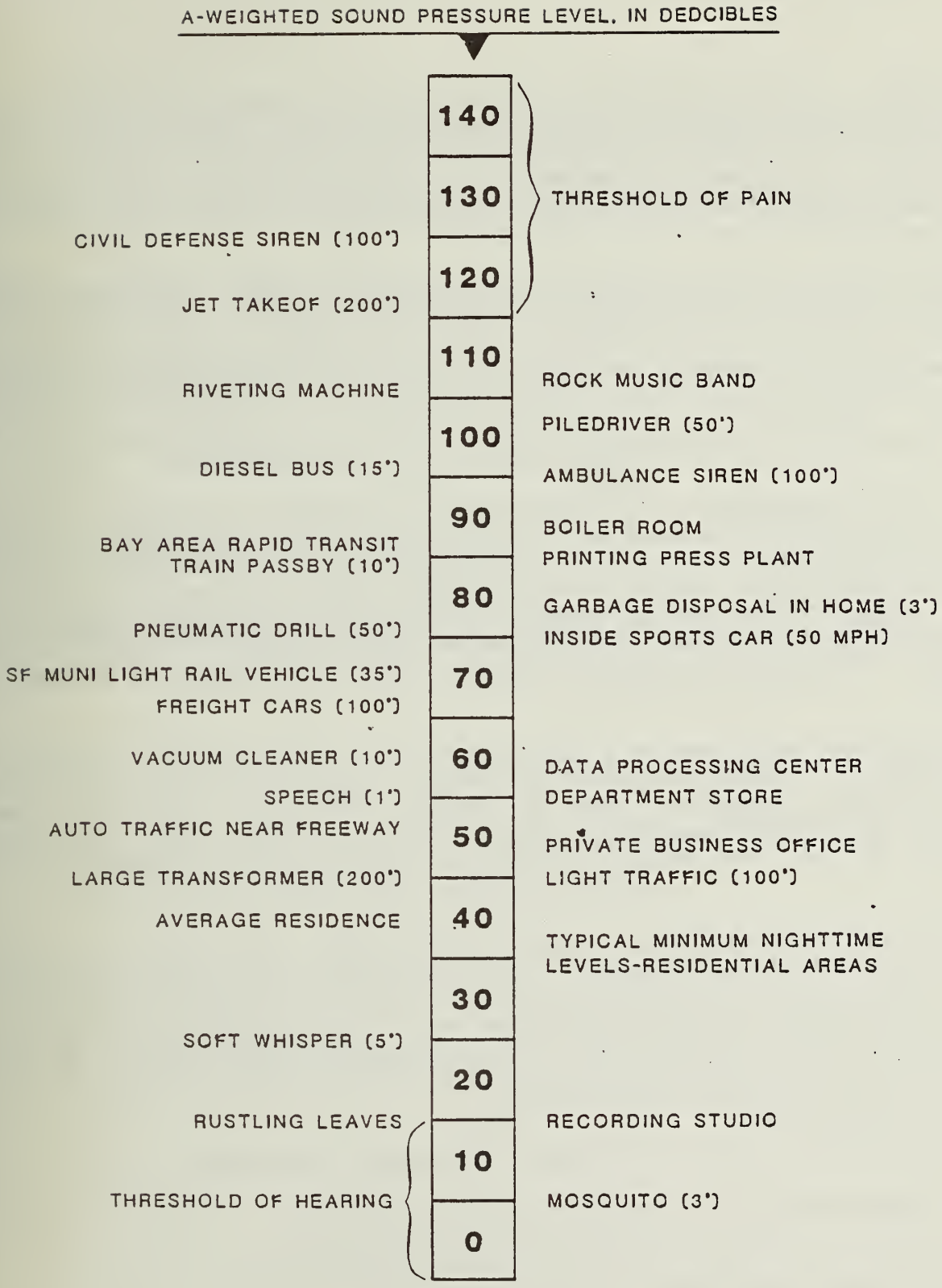
The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or Hertz (Hz). Most of the sounds which we hear in the environment do not consist of a single frequency, but of a broad band of frequencies, differing in level. The quantitative expression of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Fortunately, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively and severely deemphasizes the importance of frequency components below 1000 Hz, with mild deemphasis above 5000 Hz. This type of frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency midrange.

The weighting curve described above is called "A" weighting, and the level so measured is called the "A-weighted sound level," or simply "A-level."

The A-level in decibels is expressed "dBA"; the appended letter "A" is a reminder of the particular kind of weighting used for the measurement. In practice, the A-level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. All U.S. and international standard sound level meters include such a filter. Typical A-levels measured in the environment and in industry are shown in Figure 1.

Although the A-level may adequately describe environmental noise at any instant in time, the fact is that the community noise level varies continuously. Most environmental noise includes a conglomeration of distant noise souces which create a relatively steady background noise in which no particular source is identifiable. These distant sources may



TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

include traffic, wind in trees, industrial activities, etc. These noise sources are relatively constant from moment to moment, but vary slowly from hour to hour as natural forces change or as human activity follows its daily cycle. Superimposed on this slowly varying background is a succession of identifiable noisy events of brief duration. These may include nearby activities or single vehicle passages, aircraft flyovers, etc., which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, the statistical noise descriptors L10, L50, and L90 are commonly used. The L10 is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L10 is considered a good measure of the "average peak" noise. The L50 is the A-weighted sound level that is equaled or exceeded 50 percent of a stated time period. The L50 represents the median sound level. The L90 is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period. The L90 is used to describe the background noise.

As it is often cumbersome to describe the noise environment with these statistical descriptors, a single number descriptor called the Leq is also widely used. The Leq is defined as the equivalent steady-state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period. The Leq is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noises become very noticeable. Further, most people are sleeping at night and are very sensitve to noise intrusion.

To account for human sensitivity to nighttime noise levels a descriptor, Ldn, (day-night equivalent sound level) was developed. The Ldn divides the 24-hour day into the daytime of 7 a.m. to 10 p.m. and the nighttime of 10 p.m. to 7 a.m. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Ldn, then, is the A-weighted average sound level in decibels during a 24-hour period with 10 dBA added to the hourly Leqs during the nighttime. For highway noise environments the Leq during the peak traffic hour is approximately equal to the Ldn.

The effects of noise on people can be listed in three general categories:

1. subjective effects of annoyance, nuisance, dissatisfaction
2. interference with activities such as speech, sleep, learning
3. physiological effects such as startle, hearing loss

The sound levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Unfortunately, there is as yet no completely satisfactory measure of the subject effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual past experiences with noise.

Thus, an important parameter in determining a person's subjective reaction to a new noise s the existing noise environment to which one has adapted: the so-called "ambient" noise. 'Ambient" is defined as "the all-encompassing noise associated with a given environment,)eing a composite of sounds from many sources, near and far." In general, the more a new ioise exceeds the previously existing ambient, the less acceptable the new noise will be udged by the hearers.

Vith regard to increases in noise level, knowledge of the following relationships will be ielpful in understanding the quantitative sections of this report:

1. Except in carefully controlled laboratory experiments, a change of only 1 dBA cannot be perceived.

2. Outside of the laboratory, a 3-dBA change is considered a just-noticeable difference.

3. A change in level of at least 5 dBA is required before any noticeable change in community response would be expected.

4. A 10-dBA change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse change in community response.

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ource : Charles M. Salter Associates, Inc., December 1982.